Re-cognizing the new self: the neurocognitive plasticity of self-processing following facial transplantation

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Statement of Significance

Recognition of one's own face is a hallmark of self-awareness. Our face changes as we age, but these transformations do not necessarily alter our self- identity. But what happens when the face is altered or replaced through facial transplantation? We present the first longitudinal investigation of changes in self-face recognition throughout a patient's journey before a life-changing injury, during the injury and after facial transplantation. Neurobehavioural measures show how he preserves a strong mental and neural representation of his pre-injury appearance and gradually incorporates the new post-transplant appearance into his self-identity. These changes and underlying neural processes highlight how malleable representations of our face ensure the self's continuity over time.

Abstract

The face is a defining feature of our individuality, crucial for our social interactions. But what happens when the face connected to the self is radically altered or replaced? We address the plasticity of self-face recognition in the context of facial transplantation. While the *acquisition* of a new face following facial transplantation is a medical fact, the *experience* of a new identity is an unexplored psychological outcome. We traced the changes in self-face recognition before and after facial transplantation to understand if and how the transplanted face gradually comes to be perceived and recognized as the recipient's own new face. Neurobehavioral evidence documents a strong representation of the pre-injury appearance pre-operatively, while following the transplantation, the recipient incorporates the new face into his self-identity. The acquisition of this new facial identity is supported by neural activity in medial frontal regions that are considered to integrate psychological and perceptual aspects of the self.

Introduction

The ability to recognize one's self in the mirror is a hallmark of ontogenetic development and self-awareness. As such, it has attracted considerable interest in psychological sciences and cognitive neuroscience. Human and some non-human primates display this unique ability to recognize their own appearance and build a mental representation, also called body-image[1]. In infants, this ability that emerges around the 20th to 22nd month of age coincides with the display of social emotions and scaffolds the sense of self [2-4]. In the adult brain, multiple brain areas have been shown to underpin self-processing in general and self-face recognition more specifically[5]. The right inferior frontal gyrus (IFG), the superior occipital cortex, and the right postcentral gyrus are some of the regions that have been implicated in processing the physical features of one's own face [6–9], whereas midline cortical structures, such as the medial frontal cortex (MFC)/anterior cingulate cortex (ACC) and the precuneus are involved in processing psychological and self-referential aspects of the self, e.g. traits, autobiographical memories and emotions [9-11]. Although there has been considerable neuroimaging research investigating self-face recognition, one important question that has received far less attention relates to the continuity and plasticity of self-face representations as one's facial appearance changes over time [12]. If the face is a key defining feature of our individuality, what happens when the face connected to the self is radically altered or replaced?

To answer this question, we investigated the self-face recognition abilities and the engagement of the underlying neural networks in an individual who underwent one of the most drastic changes to one's facial appearance, a partial facial transplant. Across the history of human culture, and more recently with advances in plastic surgery, the possibility of changing one's own face for another has captured the imagination of writers, artists and scientists. That possibility became reality in 2005 when the first partial face transplant took place [13]. As of April 2020, 47 face transplants have been performed on 46 patients to address severe facial defects resulting from multiple etiologies[14-20].

Importantly, while the *acquisition* of a new face following such operations is a medical fact, the *experience* of recognizing this new face as one's own is an unexplored psychological outcome. The plasticity and cortical reorganization of somatosensory and motor cortices after hand transplantation [21] and sensorimotor recovery following facial transplantation [13,22,23] have been previously investigated. However, the plasticity and reorganization of self-recognition following alterations of the appearance of one's face have not been examined. With the present study, we focused on the very question of self-recognition of a new facial identity following partial facial transplantation.

In a longitudinal series of behavioural and neuroimaging investigations, we assessed whether and how a facial allograft comes to be perceived and experienced as the recipient's own face. This was achieved by tracing the neurocognitive processes related to changes in self-recognition as a result of changes in physical appearance following a severely disfiguring traumatic event, and again following a partial face transplant. To the best of our knowledge, this is the first ever study following the gradual recognition of a new facial self-identity by investigating its underlying neurocognitive processes.

Our approach was theoretically motivated by the large body of research on self-face recognition conducted over the last thirty years. Within the prefrontal cortex, the ACC, the inferior frontal gyrus, the medial and middle frontal gyri are often implicated in self-face recognition, mostly on the right side; within the parietal cortex, there is involvement of the inferior parietal lobule, the supramarginal gyrus and the precuneus, mainly in the right hemisphere. In addition, other regions such as the anterior cingulate cortex (mainly on the right), and the bilateral insula, have also been shown to be involved during self-recognition[6]. A recent meta-analysis [7] provides support for a right-dominated[8], but largely bilaterally distributed model for self-face processing, where four areas are consistently activated: the left fusiform gyrus, bilateral middle and inferior frontal gyri, and right precuneus. In an attempt to integrate these neural findings and conceptualize their relation to both physical and psychological aspects of self-recognition, a tripartite neural model for self-processing has been proposed by Northoff and colleagues[24]. The lower level concerns face detection, the second level up the hierarchy concerns sensory information about the face for processing self-referential facial information (e.g. physical appearance of the self-face), and the third level concerns self-referential information involved in representing identity. When controlling for the familiarity of faces, past research has shown that self-recognition engages areas upstream of the lower level of face detection, such as the fusiform gyrus. Sensory information about the self is passed on from the fusiform face area (FFA) through to the precuneus for the processing of self-referential facial information. Third, self-referential information is passed onto higher cortical areas involved in making identity discriminations, and inferences about the mental states expressed in the stimuli, as well as utilizing that information to make accurate inferences about others' mental states. Accordingly, we predicted concurrent overlap across the different faces dependent on the change of the recipient's actual appearance with gradual emergence of self-recognition of the recipient's post-transplant face.

We therefore hypothesized that the progression of facial appearances over time will compete for the magnitude of cognitive processing and neural representation, especially in areas involved at the higher level of the tripartite mode, such as the medial frontal areas. We expected stronger engagement of these areas for the pre-injury face at the start of our investigation, with a gradual disengagement and engagement for the post-injury and post-transplant faces, respectively, towards the end of our investigation.

The patient was a 25-year-old male who sustained a ballistic facial injury in June of 2016 (Figure 1). The initial injury involved the eyelids, nose, cheek, lips, maxilla, mandible, zygoma, and right orbital floor. After several reconstructive attempts, he presented with persistent lip incompetence, speech and feeding difficulties, visual alterations, and exposed hardware. Thorough evaluation was undertaken by the face transplant team, and the decision was made to proceed with partial facial transplantation, since optimal functional and aesthetic outcomes could not be achieved through autologous reconstruction. Understanding the associated risks, the patient consented to the procedure under the Institutional Review Board-approved (s14-00550) and registered clinical trial (clinicaltrials.gov; NCT02158793).

Fig. 1. Pre-operative (pre-T1, 8 mo pre-transplant), and post-operative (11 mo post-transplant) clinical images. Printed with permission from and copyrights retained by Eduardo D. Rodriguez, MD, DDS. For the actual images used in the reported experiments, please see *SI Appendix*, Fig. S1

The patient had lived with extensive facial disfigurement[1] for 18 months prior to facial transplantation on January 6th of 2018. The donor and recipient were ABO-compatible, and met additional pre-determined matching criteria based on age, sex, height, weight, dentition,

[1] While the use of facial difference and other similar terms prioritise the perspective of the patient, the term 'disfigurement' is favoured by some disability activists because it is enshrined in law in the Equality Act 2010. Disfigurement is also used in surgical and clinical contexts, and is therefore used in this paper.

craniofacial dimensions, and skin and hair colour. A partial face, bilateral jaw and teeth transplant was performed using customized surgical planning [25,26]. Preoperative printing of customized skeletal cutting guides helped achieve accurate skeletal alignment for optimal fitting of the donor allograft to the recipient's facial defect. This was confirmed by postoperative computed tomography (CT) scan [26]. The patient's postoperative course involved several revision procedures including repair of floor-of-mouth and palatal wound dehiscence on post-operative day (POD) 11, internal fixation of left mandibular nonunion, bilateral canthoplasty and complex tissue rearrangement of the lower eyelids and cheeks (POD 108), and left medial canthoplasty and complex tissue rearrangement of the left lower eyelid (POD 248). The patient has achieved facial motor and sensory recovery, in addition to improvements in speech and maintenance of oral nutrition. Sensory and motor recovery of the facial allograft were evaluated through multiple modalities including neurological examination, measurement of nerve conduction velocity/electromyography, monofilament sensory testing, speech and swallow evaluation, as well as achievement of functional end points such as tracheostomy decannulation and feeding by mouth. By one year follow-up, sensory examination was intact to light touch and monofilament, speech was intelligible, and nutritional intake was by mouth. The tracheostomy was removed on postoperative day 151[15]. Electromyography recorded return of facial nerve function with noted improvement of nerve conduction and motor recruitment correlating with improved speech and facial function through two-year follow-up. The patient has since returned to his pre-injury daily activities.

Our study quantified self-recognition performance using both behavioural and neuroimaging tasks, and contrasted the relative strength of the pre-, post-injury and post facial transplantation self-face representations, with the ultimate aim of providing a comparison of these different self-representations before and after facial transplantation. The face transplant recipient took part in five experimental sessions, two before the operation (T1-T2) and three after the operation (T3-T5). By the time he was tested at T1, he had been living with his post-injury face for 10 months.

Results

We first considered the competition and overlap between alternative facial identities present in the pre-transplant period. Candidates for facial transplantation have had at least two faces in their lifetime prior to transplantation: the face they had prior to suffering the disfiguring condition or traumatic event, and the disfigured face. Relative competition between the pre- and post-injury face for self-identity remains unknown, and raises several questions. Is the face prior to the disfiguring event the one that underpins self-identity? How do these faces compete for self-identity and how is this conflict resolved? The first two sessions took place pre-operatively, at 8 months (T1) and 2 months (T2) before the transplant, with the aim of establishing a baseline pattern of brain activity linked to the processing of the pre- and post-injury faces. In each session, the face transplant candidate saw a range of morphed faces containing varying percentages of "self-face" and familiar faces while performing a self-recognition task (Figure 2A). We used both the pre- and post-injury face as self-stimuli and, on each trial, the patient was asked to indicate with a key press whether the depicted face looked more like "self" or "other". For each of the different facial appearances (pre-, post-injury) there were six different degrees of morphing (see Methods).

Behavioural responses (i.e. self or other) were entered into logistic functions to estimate the Point of Subjective Equality (PSE), defined as the degree of morphing with equal probability of being judged as “self” or “other”, for each of the two facial appearances. PSEs higher or lower than 50 suggest that morphed images must contain larger or smaller percentages of the self, respectively, to be recognized as self. For fMRI analyses, brain areas showing increased activity during the perception of each self-face (vs other’s face) were estimated with parametric contrasts corresponding to the percentage of self in each photo.

The observed pattern of PSEs (Figure 2B) suggested a liberal self-recognition bias towards the pre-injury face compared to the post-injury face. In other words, for the pre-injury face, a smaller percentage of self was needed to be present in the photograph for the patient’s face to be recognized as ‘self’ (T1 = 43.7; T2 = 46.4), whereas for the post-injury face, the morphed image required approximately an additional 14% of the patient’s disfigured face to be present for the morph to be recognized as ‘self’ (T1 = 57.4; T2 = 59.2). This pattern suggests a perseverance of the patient’s pre-injury face in his mental representation of self-image. Moreover, as shown by the accuracy scores for self- and other recognition (see Supplementary Figure S2), while the patient’s performance for the recognition of his own face fluctuated both across time and across the different faces, performance for the recognition of the other’s face was at ceiling level independently of the time-point and of the morphing identity. This pattern rules out a generalized deficit in face-recognition, and suggests a specific effect for recognition of his own facial identities. It is also worth noting that while the identification of the post-injury face was relatively diminished at some time points, accuracy at T1 was considerably high (>93%) showing already good recognition ability at this early time point. Together, this evidence suggests that the biases observed should be explained by psychological factors rather than the objective ability to recognize each facial appearance.

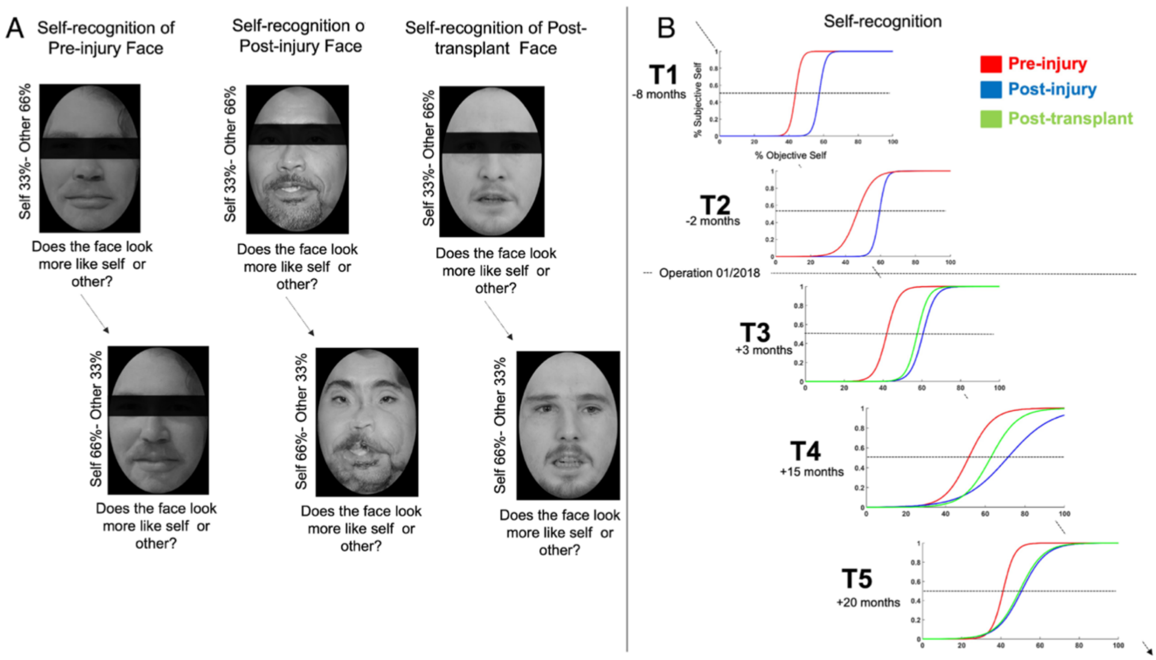

Fig. 2. (*A*) The behavioral self-recognition tasks used. On every trial, the patient was asked to indicate whether the depicted face looked more like himself or more like another familiar face. The area around the eyes is covered here for display purposes, but was visible to the patient throughout. At T1 and T2, self- recognition was performed in two settings. First, his pre-injury face was morphed with another familiar face, and next, his post-injury face was morphed with a second familiar face. For T3, T4, and T5, he performed the self-recognition in an additional third setting, where his transplanted face was morphed with a third familiar face. (*B*) Psychometric curves for the self-recognition of each face. The PSE for each curve is the x-value of the point where the curve intercepts the black horizontal line. Higher PSE values reflect the need for higher percentage of self-traits in the photo for self-recognition to take place. pre-injury T1 = 43.7; T2 = 46.4, T3 = 41.9; T4 = 51.6; T5 = 41.4; post-injury: T1 = 57.4; T2 = 59.2; T3 = 60.6; T4 = 71.3; T5 = 50.6; post-transplant: T3 = 57.6; T4 = 62.7; T5 = 49.5.

At the neural level, significant clusters of increased activity were observed for both the pre- and post-injury self-faces in several brain areas known to be involved in self-recognition (see Figure 3 for T1 and T2 and Table S1 in Supplementary Material for all significant clusters). Increased neural activity was present in the occipital cortex for both the pre- and post-injury faces at both T1 and T2. Interestingly, clusters in cortical midline structures, such as the MFC, ACC and precuneus, areas associated with self-referential processing [9,10], showed a stronger engagement for the pre-injury face. This pattern accords with observations that activations of midline structures and portions of the anterior cingulate cortex reflect self-processing as well as increased familiarity with self-related psychological and physical constructs, including information such as one's face [27–29]. Conversely, the IFG shows a greater engagement for the post-injury face relative to the pre-injury face, and such involvement may reflect the processing of physical aspects of the post-injury self-face [30].

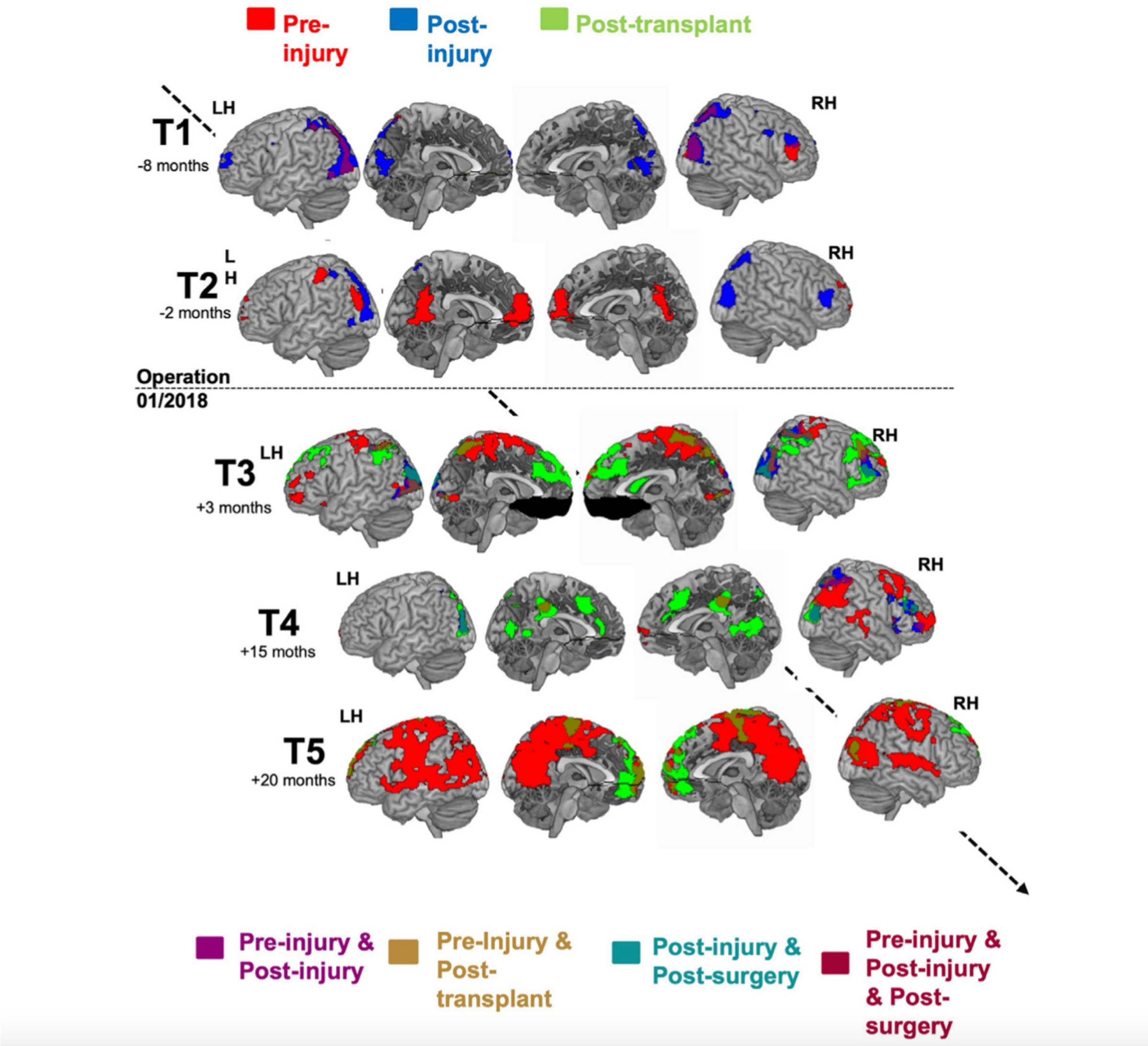

Fig. 3. BOLD response when looking at the three different faces (pre-injury, post-injury, post-transplant) (LH: left hemisphere; RH: right hemisphere).

The pre-operative testing phase shows that the transplant candidate still maintained a strong representation of his pre-injury face while several brain areas were also engaged during the processing of his post-injury face. The pre-operative testing enabled us to establish a baseline self-recognition pattern to compare to post-transplant self-recognition (Figure 3). Following successful facial transplantation, the three testing sessions focused specifically on the gradual emergence of self-identification for the new facial identity. To that end, we added the third face (post-transplant) in our experimental design, and assessed the transplant recipient's self-face recognition performance for his new facial identity.

The recipient's behavioural responses in the post-transplant testing sessions confirmed the same bias towards a more liberal recognition of the pre-injury face relative to the other two appearances. This suggested that despite the radical alterations to his appearance, first as a result of traumatic injury and later as a result of facial transplantation, the face transplant recipient still identified with his pre-injury face. However, the results also revealed a gradual enhancement in the recognition of the post-transplant face; there was gradual and consistent alignment of recognition of the patient's new face with his pre-injury face (see Figure 2, Time-points 3-5). Therefore, the appearance of the newly acquired face slowly attained a comparable mental representation to that of the pre-injury face. To provide statistical support for this interpretation, we compared the PSEs of each face with Wilcoxon non-parametric pairwise comparisons. Results suggested a biased identification of the pre-injury face compared to the post-injury face ($z=-2.02$, $p=0.043$) but no significant differences between pre-injury and post-transplant ($z= -1.60$, $p=0.109$) nor between post-surgery and post-transplant ($z=-1.60$, $p=0.109$) suggesting a reduced identification with the post-injury face. We note however that, due to the small and imbalanced number of observations across face conditions, statistical inferences should be made with caution**.**

Self-processing of the post-transplant face was also neurally supported by the observed patterns of brain activity, most notably increased activity in the medial frontal regions, ACC, occipital cortex and right IFG across all three sessions (T3, T4, T5; Figure 3). The right IFG, in particular, has been consistently implicated in facial self-recognition [6] and the existing neuroimaging data suggests that this area is involved in self-other differentiation [30], but also in multimodal representations of the self [31] and more diachronic self-representations [12] such as the self-recognition of both current and younger appearances of the self. The pattern we observed in the IFG during this longitudinal study is consistent with the hypothesis that post-transplant, the recipient comes to recognize the post-transplant face as his own, while the post-injury face is no longer eliciting such neural responses at T5. The medial frontal regions such as the ACC have been shown to be activated in response to highly salient self-relevant information [32] and are thought to serve as a neural hub, integrating information about reflective aspects of the self with the processing and evaluation of perceptual self-face images [33]. In addition to this gradually increasing enhancement of activation when seeing the post-transplant face, we observed a gradually decreasing engagement of the same brain areas when looking at the post-injury face, and notably no evidence of engagement of these areas at T5 (see Figure S4 and Table S4 in Supplementary Materials for activation maps associated with increased and decreased activity for each self-face across time). Conversely, the perception of the pre-injury face remained associated with activity in areas related to self-processing across all sessions, including activity in medial prefrontal regions at T5 (Figure 3). These patterns of whole-brain activity were largely mirrored by the patterns observed when plotting activity for each self-face in regions of interest (ROIs) previously identified in meta-analyses on self-face recognition [9] (Figure 4). With regard to the pattern of activity in the ROIs, we note that activity in the right Insula ROI was found to be, overall, increased for pre-injury and post-transplant self-face processing compared to the post-injury face. The insula is thought to be particularly important for the processing of internal bodily sensations and their integration with exteroceptive information. Strongly implicated in the generation of subjective and emotional feelings, it has been proposed that insula activity in self-face processing reflects affective and motivational states related to self-awareness[34] suggesting greater affective and bodily engagement with the pre-injury and post-transplant faces. We should also note that no significant activity in any of self-face processing analyses was found in the amygdala (see Supplementary Materials, Figure S5), a region strongly involved in (mostly negative) emotional reactions to salient stimuli, including in the processing of the self-face by depressed individuals with recent suicidal attempts[35].

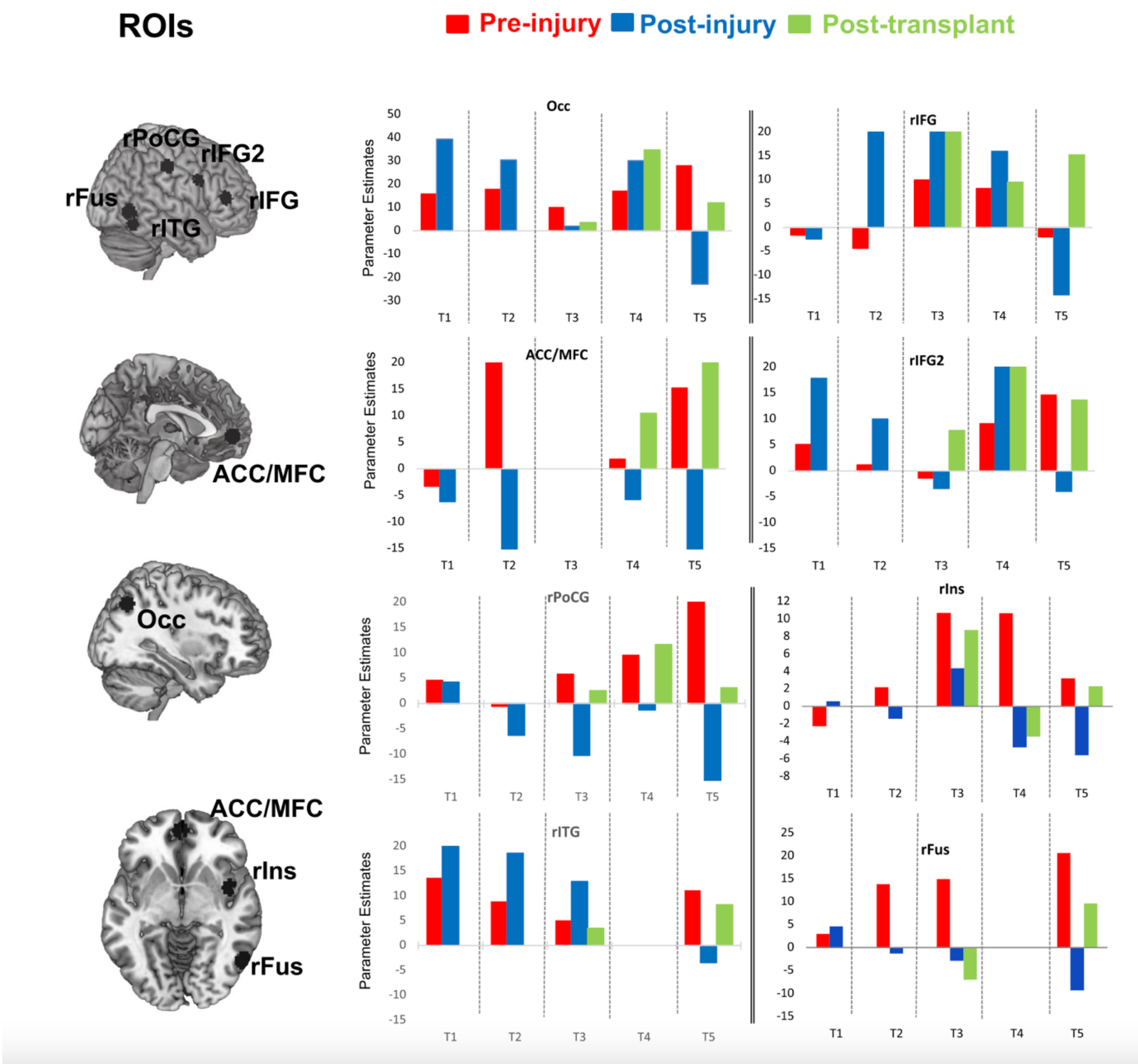

Fig. 4. Plots of parameter estimates for the observation of each self-face in the ROIs: superior Occ, right inferior frontal gyrus (rIFG and rIFG2), Anterior Cingulate Cortex/Medial Frontal Cortex (ACC/MFC), rITG, rFus, rIns, and rPoCG.

To directly compare brain responses between the different faces, we contrasted the activation maps for each face averaged separately across pre-transplant and post-transplant sessions in a pairwise fashion. Results (see Figure 5 and Table S2) for the pre-transplant comparisons showed that the pre-injury face, compared to the post-injury face, was associated with increased activity in midline regions, specifically, in one cluster comprising the ACC and anterior portions of the MPFC and a cluster in the precuneus. Conversely, the perception of the post-injury (vs pre-injury) face lead to increased activity in Occipital regions and bilateral IFG. We also found a cluster in the dorsal MPFC, thus posterior to the regions typically associated with the processing of psychological aspects of the self. These results confirm pre-transplant engagement of self-processing brain regions to the perception of both faces, with the pre-injury face activating primarily midline regions involved in self-referential processing and the post-injury face brain areas associated with the processing of physical features of the self.

After facial transplantation however, no brain region was found to be significantly more active for the post-injury face compared to the pre-injury or post-transplant face. In contrast, the pre-injury vs post-injury comparison was now associated with widespread activations in lateral precentral/parietal cortices (including post-central gyrus), superior temporal cortex and posterior midline regions, such as the precuneus and posterior cingulate cortex, and to a less extent anterior MPFC (Figure 5). Increased activity was also observed over precentral cortex/postcentral gyrus and superior temporal cortex in comparison to the post-transplant face. Notably, it was the perception of the post-transplant face that elicited greater activations in anterior midline regions, such as widespread activations over the ACC/MPFC and precuneus/PCC in the post-transplant vs post-injury contrast and in the ACC only for the post-transplant vs pre-injury comparison. The former contrast was also associated with increased activity in the IFG bilaterally and in the left insula. Together, this pattern of brain activity suggests increased psychological identification with the post-transplant face and decreased identification with the post-injury face.

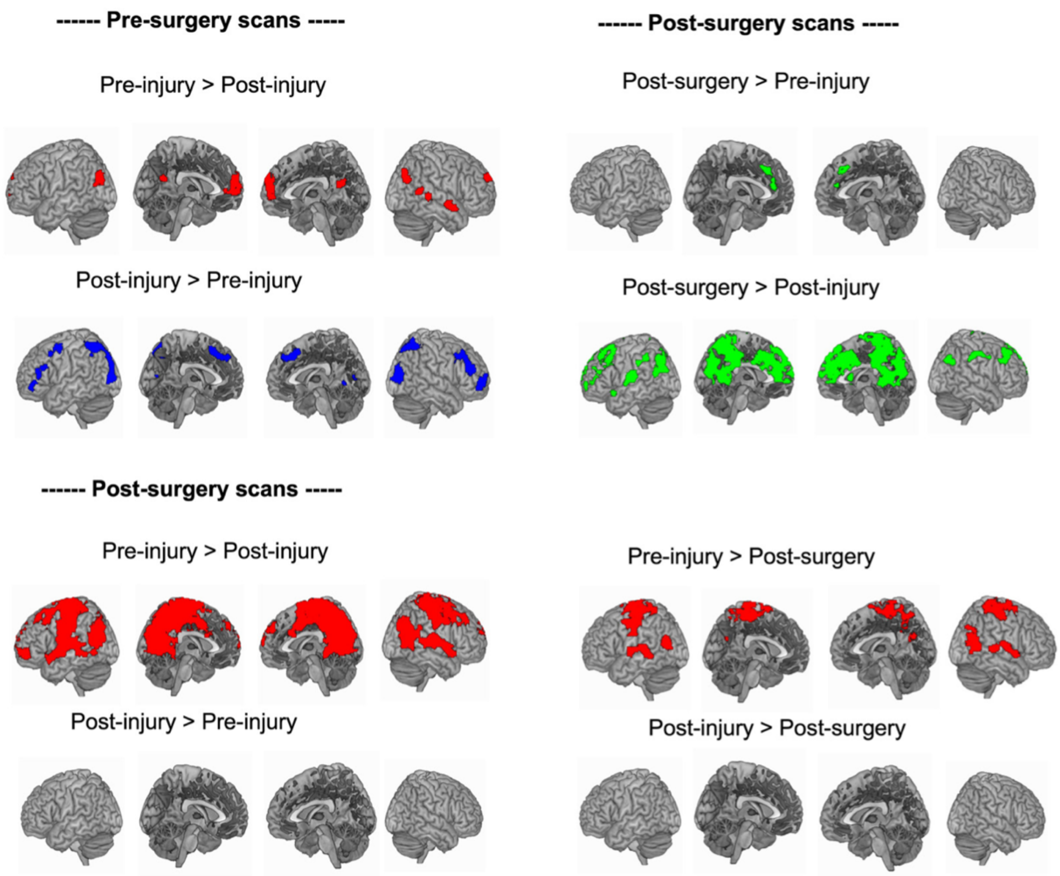

Fig. 5. Increased BOLD responses to the perception of each self-appearance relative to each other. For these comparisons, activation maps for the perception of each face were first averaged separately within pre-transplant and post-transplant scans.

The parametric analysis adopted here is consistent with the large body of neuroimaging research in self-face recognition (*3*) and provides a sensitive measure to identify brain regions that become more responsive as the percentage of self present in the photos increases. However, because this analysis is not necessarily aligned with the recipient's responses in the self-face recognition task, it does not inform on the patterns of brain activity associated specifically with the conscious identification of each face. Instead, it bypasses overt self-recognition and offers a more implicit measure of self-processing that is, partially, independent on any of the recipient's response bias.

To explore possible similarities and discrepancies between brain responses to automatic self-processing and overt self-recognition, we re-analysed the data according to the patient's behavioural performance, that is we contrasted trials where he responded as "self" or "other" to each face independent of the morphing level of the stimulus. The observed activations are largely consistent with those observed in the standard analyses (see Figure 6 and Table S3 for all significant clusters) suggesting an alignment between the neural areas involved in the processing of the three faces and in their overt recognition. One interesting exception is the activity in the medial prefrontal regions at T4 that was now present for the pre-injury and not for the post-transplant face. Tentatively, this may suggest a still rather implicit identification with the new appearance at this stage. However, and consistent with the main analysis on self-processing, at T5, there were no significant clusters for the post-injury face, while for both the pre-injury and post-transplant faces we observe activations in medial frontal areas, and for the post-transplant face alone we also observe activity in the IFG (Figure 6).

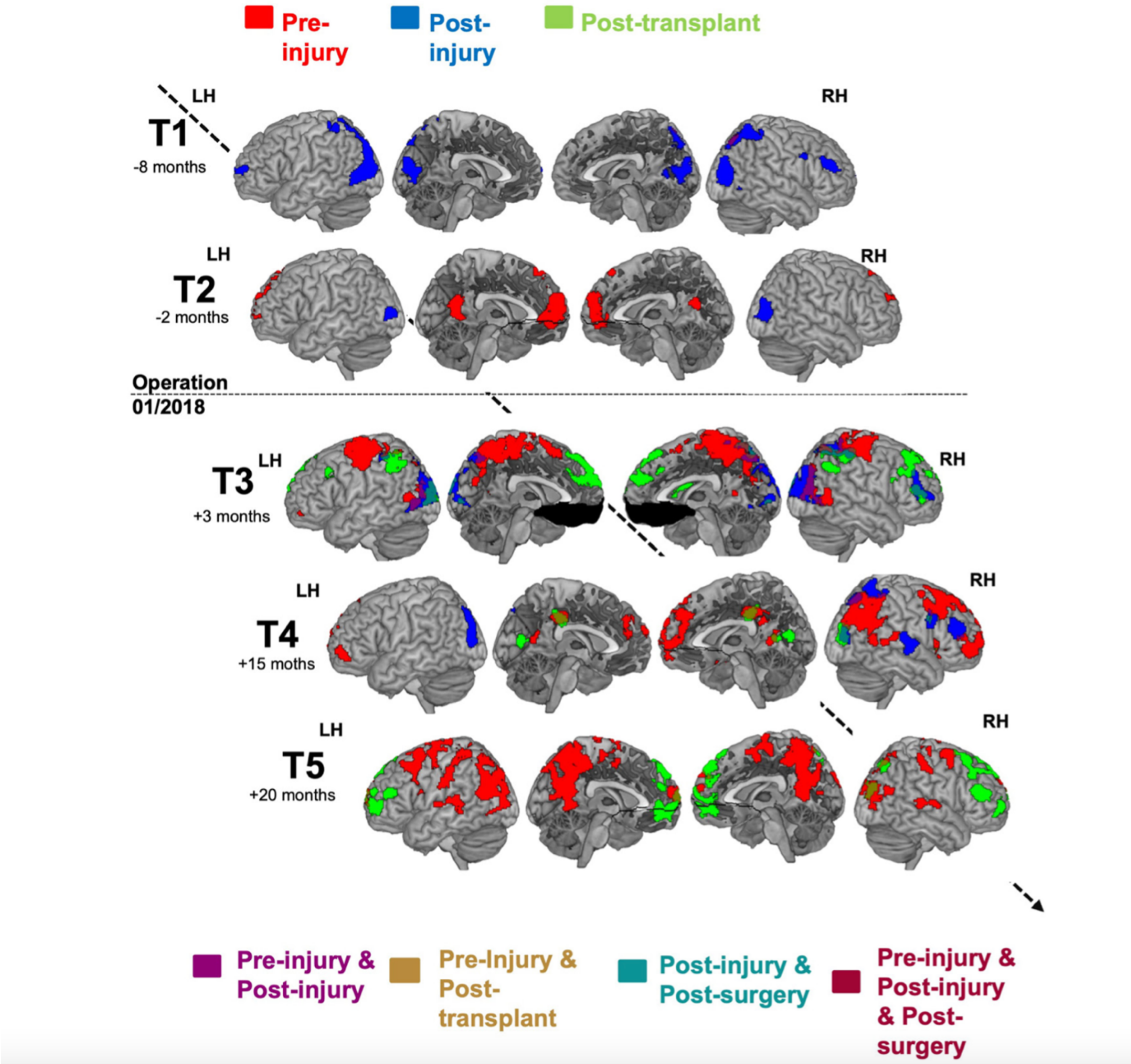

Fig. 6. Activations for the correct self-recognition for each face across each time point. Color pink indicates the overlapping activations when looking at the pre-injury and post-injury faces, color turquoise indicates the overlapping activations between when looking at the post-injury and post-transplant faces and color yellow indicates the overlapping activation when looking at the pre-injury and the post-transplant faces (*SI Appendix*, Table S3).

Discussion

The face is our most distinguishable physical feature; it is central to our sense of self-identity and plays a fundamental role in social interactions as the primary vehicle for non-verbal communication of emotions and intentions. Therefore, it is not surprising that individuals with acquired facial disfigurement tend to experience profound psychosocial challenges as they adjust to a new appearance with its associated functional and social considerations[14]. Recent developments in the medical sciences have provided the opportunity for patients with severe facial disfigurement to undergo facial transplantation in order to restore most functional, social, and aesthetic capacities. However, facial transplantation also comes with unique challenges as recipients need to integrate their new appearance into their self-identity. We present the first longitudinal investigation of changes in self-face recognition throughout a recipient's journey before and after facial transplantation. Behavioural indices and patterns of brain activity suggest that while the recipient shows overall good recognition of all three faces, he preserves a strong mental representation of his pre-injury appearance throughout the pre-transplant and post-transplant periods. Post-transplantation, he gradually incorporates this new appearance into his self-identity.

Previous research on self-recognition has identified a network of brain regions that are consistently active when perceiving self-stimuli compared to familiar or highly meaningful stimuli [5,6]. In line with the literature, we observe consistent results in the face transplant recipient's self-recognition over time, such as the activity in the right IFG. The right IFG has previously been shown to be activated when distinguishing between self-face and other-face [30], as well as when participants engage with self-recognition of different appearances of one's self across different periods of life [12], a finding that speaks to the continuity and stability of self-face neural representations across the lifespan. For example, IFG was engaged when people recognize images of themselves from childhood as well as when recognizing their current appearance [12]. In addition, the MFC was consistently activated during self-recognition of the post-transplant face (T3-T5). This region has long been proposed to reflect the processing of abstract mental representations of the self, such as traits, autobiographical memories, attitudes, or emotional evaluations (typically positive) of the self [9,11,36-39]. The engagement of this region was observed for both the pre-injury and post-transplant faces, a pattern that seems consistent with the hypothesis that the post-transplant face slowly but steadily acquires a comparably salient neural representation similar to the pre-injury face. The fact that MFC was consistently active during the perception of the post-transplant appearance suggests not only identification with this new appearance as representative of the physical self, but also a higher-order and more reflective identification with the face, in line with the influential tripartite model of self-recognition[24]. This area of the MFC was found to be active during the perception of the pre-injury face but not to respond to the patient's post-injury face, which seems to support the hypothesis of a preserved identification with the former appearance and weaker identification with the post-injury face, likely reflecting an adaptive modulation of internal schema related to self-evaluation[39].

Cases of facial transplantation represent a dramatic change in one's facial identity with important psychological consequences. In line with the neural data, the emergence of self-recognition for the post-transplant face and the gradual disappearance of the mental representation for the post-injury face further document the plasticity of self-processing. The behavioural pattern observed here suggests that the face transplant recipient was able to recognize his post-transplant face more easily, compared to the post-injury face across almost all time points. At the time of facial transplantation, he had been living with his post-injury face for 18 months, while the last time-point he was tested at took place 20 months following facial transplantation. In other words, he had spent roughly the same amount of time with each of these two faces; of course, the conditions of acquisition of the two faces were radically different. The post-injury face was the result of a highly traumatic event that resulted in severe disfigurement, and psychological adjustment to this severely injured face is often particularly difficult[40]. On the other hand, the new face acquired through facial transplantation represents an elective decision with hope for substantial physical and psychosocial benefits. The apparent better adjustment to the post-transplant face and its superior self-recognition allude to the hypothesis that the changes observed in the neural network underpinning self-processing cannot be simply due to sensory processing and visual perception or familiarity with the face, as both the post-injury and post-transplant faces were present for comparable amounts of time and the self-face recognition accuracy for the post-injury face was highest for T1 (see Figure S2). The observed pattern may reflect top-down modulations driven by affect and beliefs about the outcome of such a radical yet elective and medically successful intervention.

The present longitudinal study focused on one individual raising concerns about the generalizability and replicability of our findings. To date, 48 face transplants have been performed on 46 patients worldwide. To the best of our knowledge, this is the first study that investigates behavioural and neural changes in self-face recognition in such individuals. Testing individuals who undergo such life-changing experiences is especially challenging from scientific, ethical, logistical and multidisciplinary perspectives. Our approach provides a proof-of-concept of a positive identification with a new facial identity and is important in advancing our understanding of the plasticity of self-recognition and for shaping future research approaches as such operations may become more frequent. Replicability is an ongoing process and one that may show a diversity in responses to self and identity. In preliminary studies that capture only post-transplant self-recognition, two additional patients exhibited unique patterns of self-recognition. One patient identified more with his “pre-injury” appearance, but showed very accurate recognition and strong identification with his “post-injury” and “post-transplant” faces. This pattern was supported by neural engagement of key areas implicated in the self-face recognition network when asked to recognize post-injury and post-transplant faces. In contrast, the second individual retained particularly strong mental representation of his pre-injury face, showed a lack of recognition as “self” of his “post-injury” and “post-transplant” faces, and the brain areas typically engaged during self-face recognition showed attenuated responses to his injured and post-transplant faces. These results indicate how differently these two recipients have adapted behaviourally, neurally, and presumably psychologically to their new appearance. This evidence of adaptive assimilation warrants further study of its functional underpinnings and long-term implications. In addition, and beyond quantitative measures of self-recognition, there is an increasing awareness of the need to develop better tools for assessing quality of life in such cases that can capture the actual life-enhancing impact of facial transplantation on the patient or their families[41] .

This segues into a related issue of the extent to which there is stability of self-face representations over time in the absence of face transplantation. We have previously demonstrated this stability, where we looked at the same questions of plasticity of self-recognition in healthy individuals[12]. There we found consistent results in terms of brain areas involved in recognizing different visual instances of one’s own face (i.e looking at one’s self photos taken at different ages), as the ones we observed in the patient reported here, with the involvement of the IFG. However, it must be noted that control subjects who haven’t undergone such alterations in their facial appearance cannot be used as adequate control to a case of facial transplantation, given the very severe disfigurement and associated psychological trauma. For that reason, more appropriate experimental controls can be provided by the use of a longitudinal design, as we did here, and the inclusion of three different faces in the experimental tasks.

Finally, it is important to consider that affect and emotional responses may play a key role in how recipients of face transplants respond both to the post-injured face and their new facial appearance following transplantation. For example, the profound negative affect associated with the disfigured face may be at the basis of reduced identification with this face. Similarly, the gradual recovery of functionality and likely increased positive social feedback, among other factors, may have greatly contributed to an increase in positive associations and identification with the post-transplant face. The observed activity in brain areas such as the insula and the ACC might reflect greater affective engagement with the pre-injury and post-transplant appearances relative to the post-injury face. The importance of these brain regions in the emotional response during self-face processing has been shown in different studies associating reduced activity in these regions with negative affect, such as embarrassment[42] or in depressed individuals with suicidal ideation[43]. Nevertheless, we need to note that our study focused on investigating the behaviour and neural underpinnings of self-face recognition and was not designed to evaluate the recipients' emotional responses to each face. Ethical considerations in the present case meant that we were not able to support such interpretations with further examinations on these processes. When possible, future research may complete the present findings by exploring how affective dimensions relate to neural activity associated with the perception and recognition of different self-appearances.

This longitudinal study examined the neural plasticity of self-recognition in an individual who twice in his life underwent major alterations in his facial appearance. Facial transplantation raises fundamental ethical and psychological questions about personal identity and personal choices. Such interventions are pursued by individuals with severe facial disfigurement whose quality of life is greatly impacted. While the operation itself poses health risks such as lifelong immunosuppression and potential transplant rejection, there are also important functional, psychological and aesthetic benefits with considerable improvement in all aspects of quality of life [44], such as on independence, self-esteem, intimate relationships, social interactions, and potential return to employment. Our findings document how a surgically successful face transplant resulted in the gradual emergence of robust self-recognition capacity for a radically new facial appearance. These findings also highlight the extent to which the neural network that underpins self-recognition may process in parallel distinct representations of one's appearance. The self and its neural representation possess sufficient plasticity to ensure assimilation of changes with a sense of continuity over time. The plasticity and continuity of the self that we document here are particularly relevant for modern selves who, due to technological and medical advances, seem to be exposed to new, often radical, possibilities for change.

Methods

Ethical Approval

The patient provided written consent to participate in a clinical trial assessing self-face recognition in facial transplantation recipients requiring completion of a self-face recognition task during functional magnetic resonance imaging (fMRI) examination that was approved by the NYU Langone Health Institutional Review Board (Study # s16-01144; ClinicalTrials.gov, NCT03027141).

Stimuli

We presented to the patient photos of his own face in three settings (pre-injury; post-injury; post-transplant) morphed with faces of same-sex people who were familiar to and chosen by him. The patient's pre-injury face was morphed with a photo of a same-gender relative of his, the post-injury face with a photo of a famous person of high familiarity to the patient (T1 to T5), and the post-transplant face with a photo of another famous person of high familiarity to the patient (T3 to T5). The patient's post-transplant photos were updated with recent photos before each scan (see the photos used in Figure S1). Due to practical constrains only one photo of each face was used as stimuli. While this is common approach in the field it may induce bias as the patient might respond in particular ways to specific photos. However, we note that possible biases are less relevant as we compare activity maps across sessions. Each face used in T1 and T2 had six degrees of morphing (0%-self/100%-other; 20%-self/80%-other; 40%-self/60%-other; 60%-self/40%-other; 80%-self/20%-other; 100%-self/0%-other) and those in T3-T5 had four degrees of morphing (0%-self/100%-other; 33%-self/66%-other; 66%-self/33%-other; 100%-self/0%-other) as there were three different conditions at T3-T5 with the inclusion of the post-transplant face. Fewer levels of morphing had to be used in T3-T5 to accommodate for the post-surgery stimuli and avoid overly long scanning sessions while maintaining statistical power. This can potentially induce biases in the power and sensitivity to estimate activity related to the perception of each face between pre- and post-transplant sessions. However, because our analyses are mostly concerned with the comparisons between faces within sessions such potential biases would not undermine the interpretations of our main results. The photos were desaturated (i.e., turned into black and white) and matched for mean luminance within face condition, i.e. pre-injury, post-injury and post-transplant. Moreover, a black oval-shaped template was imposed on them to remove non-facial attributes (e.g. background, hair, ears) that could interfere with facial recognition [45,46]. We also created one scrambled control image of each face by randomly rearranging the pixels. These images preserved some low-level visual properties (e.g. average luminance) but had no distinguishable shape, i.e. face. Including these pictures in the face-recognition protocol helped to control for brain-activity related to low-level visual processing (e.g. luminance) not related to face-recognition.

Procedure

The patient was positioned in the fMRI scanner in a dimly lit environment. The visual stimuli were back-projected on a screen behind the magnet, and visible to the patient via a mirror mounted on the MRI head coil. The entire session consisted of four blocks of fMRI during which the patient performed the self-recognition task (approximately 11 minutes) and one structural MRI sequence (approximately 5 minutes), carried out between the 2nd and 3rd fMRI blocks. Each block of the self-recognition task consisted of 90 trials: six of each condition (Face x Morphing level) and 18 scrambled images. Thus, the entire task comprised a total of 24 trials per condition presented in a fully randomized fashion. Data from the fourth (and last) block of T5 was discarded due to excessive head movements (movement spikes > 3mm).

In each trial, a photo was presented for two seconds in the centre of a black screen. The photo then disappeared from the screen, and immediately two labels ("Self" and "Other" or "Scramble" and "Self") were shown for two seconds on either the left or right side of the screen, randomized and equally distributed on the left or the right across the whole experiment. During this period, the patient was required to indicate, with a left or right key press, whether the depicted face looked more like “self” or “other”. No feedback on performance was given and a fixation cross “+” was present between trials. The inter-trial-interval varied randomly between four and ten seconds.

MRI acquisition parameters and data analyses

Whole-brain imaging data was acquired with a 3 Tesla Siemens Magnetom Skyra (Siemens Medical Systems, Erlangen, Germany). Thirty-four slices of functional MR images were acquired using multiband echo-planar imaging (EPI) with the following parameters: acceleration factor=2, TR=1000ms, TE=30ms, slice thickness=3.0mm, flip angle=62°. Additionally, an anatomical T1-weighted MPRAGE sequence was acquired as reference (TR=2.3s, TE=2.98ms, voxel size 1 × 1 × 1 mm, FOV=256 × 256 × 160mm, 160 axial slices).
SPM12 (www.fil.ion.ucl.ac.uk) implemented in MATLAB (v 2018a, The MathWorks, Natick, MA) was used for data pre-processing and statistical analyses. The first four image volumes of each run were used for stabilizing longitudinal magnetization and were discarded from the analysis. Standard pre-processing methods were adopted. To correct for head movements, rigid body transformation (realignment) was applied and six estimated motion parameters for each subject added as regressors of no interest in the statistical multiple regression model. Functional images were co-registered to the patient’s deskulled structural image and normalised to the standard SPM12 EPI template, resampled to 2mm isotropic voxel size, and spatially smoothed using an isotropic Gaussian kernel of 8-mm FWHM.

To maximize comparability of activation patterns across sessions, data from all sessions was analysed in a single general linear model. Data was best fitted at every voxel by convolving the event onset delta functions with the canonical haemodynamic response function (HRF) for each event type: 12 experimental conditions (i.e. T1-T2: 2 faces x 6 morphing levels; T3-T5: 3 faces x 4 morphing levels), the scrambled faces, key presses and the 6 motion regressors. HRF analyses were time-locked to the photo onset (duration=0s). To identify voxels whose activity covaried parametrically with the percentage of self in the photo, we created parametric contrasts for each face. That is, the parametric modulators scaled the HRF amplitude to correspond to the percentage of self in each photo and identify brain activity related to the processing of self-features for each face. The activation maps are presented in Figure 3 and Table S1 in Supplementary Material. In a separate analysis, to directly compare patterns of brain activity in response to the different faces, first we averaged the brain activity for each self-face separately for pre- and post-transplant scans. Then, we created t-test contrasts comparing these averaged activations maps to look for brain areas showing increased brain activity for each self-face relative to the other self-faces in a pairwise fashion (activation maps reported in Figure 5; Table S2 of activations in Supplementary Materials). An additional set of analysis was carried out by contrasting brain responses to photos the participant identified as “self” with those identified as “other”. Thus, the design comprised 4 experimental conditions in T1-T2 (2 faces x 2 response types) and 6 (3 faces x 2 response types) in T3-T5 (activation maps reported in Figure 6; Table S3 of activations in Supplementary Materials). For all whole-brain analyses, initial voxel-level statistical maps were set to a threshold at $p<0.005$ (uncorrected) and corrected for multiple comparisons at cluster level $p<0.05$ (False Discovery Rate (FDR)).

For descriptive purposes (Figure 4), region of interest (ROI) analyses were carried out by computing an F-contrast reflecting the parametric increase of brain activity in response to the increased percentage of self present in each morphed image shown. That is, this contrast provides the average activity (contrast estimates) for the perception of each self-face (vs other-faces) in the six ROIs identified by a meta-analysis [9] as involved in self-face recognition and self-referential processing (see Fig 4): Anterior Cingulate Cortex (MNI coordinates: x=-1, y=53, z=-1); two regions within the right Inferior Frontal Gyrus (MNI coordinates: x=46, y=38, z=10; and: x=51 y=9, z=27); Superior Occipital Cortex (MNI coordinates: x=27, y=-67, z=43); right Inferior Temporal Gyrus (MNI coordinates: x=50, y=-56, z=-14); right Postcentral Gyrus (MNI coordinates: x=54, y=-22, z=41). We note that while this meta-analysis [9] did not identify any region in the fusiform gyrus and insular cortex, others have argued for the importance of these regions in the processing of perceptual and affective-motivational aspects of self-processing, respectively[34]. Therefore, we included in our analyses two additional ROIs identified in another recent meta-analysis as more active for Self vs Familiar stimuli[34] (see Fig 4): right Fusiform gyrus (MNI coordinates: x=55, y=-61, z=-3); right Insula ((MNI coordinates: x=43, y=3, z=-1). Finally, we also investigated the possible activation of the amygdala in self-face processing, which would likely reflect affective responses[35], and report these results in the Supplementary Materials.

It is important to note that MRI-safe maxillomandibular hardware and orthodontic appliances utilized post-transplantation induced image artifacts over the rostral areas of the anterior prefrontal cortex, particularly at T3. Such artifacts were greatly mitigated at T4 and T5 with removal of orthodontic brackets and by changes in image acquisition parameters (see further details in Supplementary Materials). To account for this and investigate activity in the anterior prefrontal regions we re-ran all analyses in a separate generalised linear model without the data acquired at T3. Results from this model are reported only for anterior prefrontal regions and sessions T1, T2, T4 and T5. This region can be identified in Figures 3, 5, 6 by a delimitating black contour, and detailed activation maps can be found in Supplementary Materials.

<u>Data availability</u>

Raw behavioural data can be found here:
https://osf.io/gy8fx/?view_only=69a7b59426b54aa3bd860468eb727cb8

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Supplementary Material for :

Re-cognizing the new self: the neurocognitive plasticity of self-processing following facial transplantation – Supplementary Material

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Figure S1

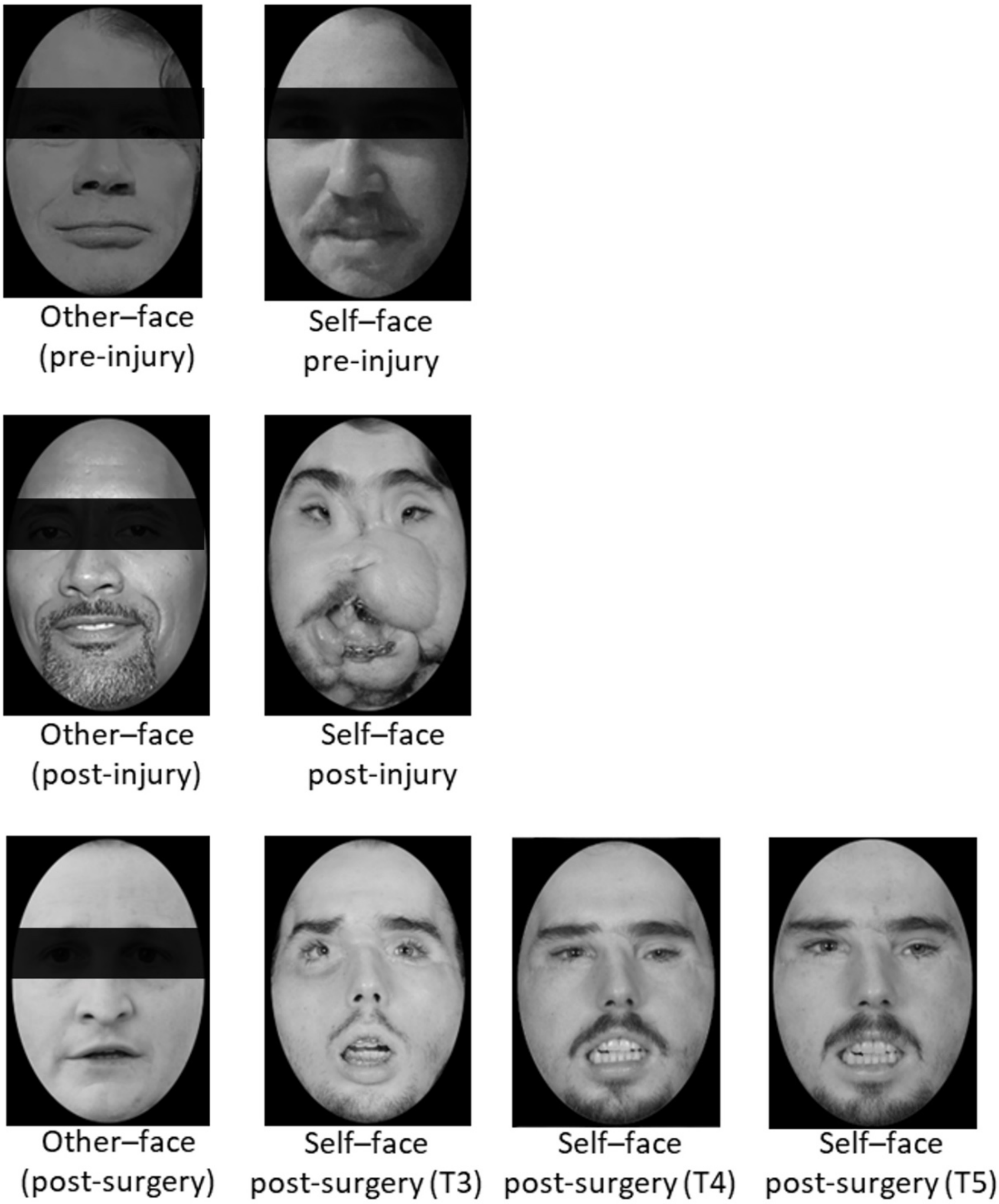

Figure S1. Stimuli used to create the face-morphings for each session. Eyes are hidden from view for display reasons.

Figure S2

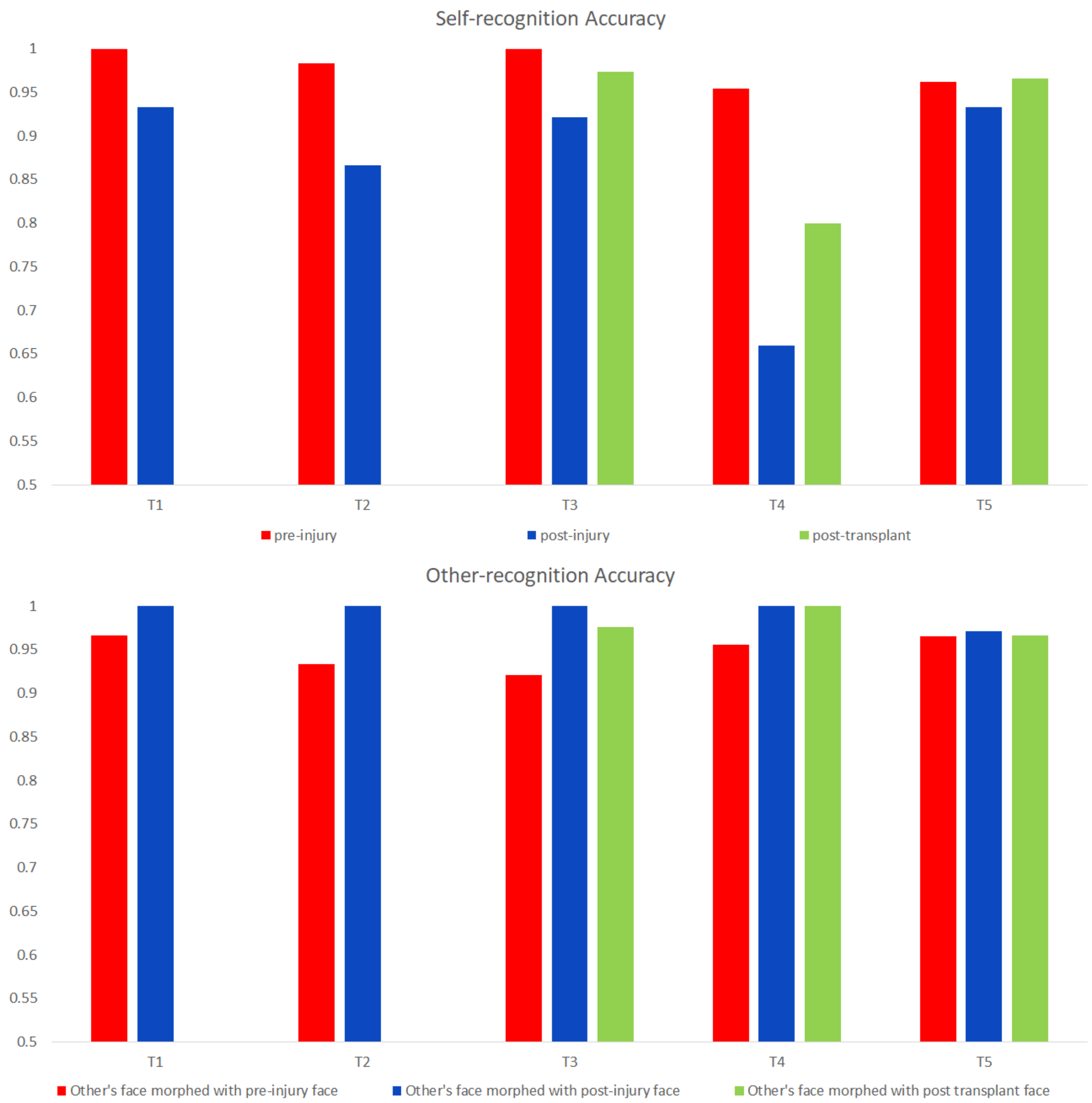

Figure S2: As shown by the accuracy scores (y axis) for self- and other recognition, the recipient's performance for the recognition of his own face fluctuated both across time and across the different faces. Performance for the recognition of the other's face was at ceiling level independently of the time-point and of the morphing identity. This pattern rules out a generalized deficit in face-recognition, and suggests a specific effect for recognition of his own facial identities.

Figure S3.

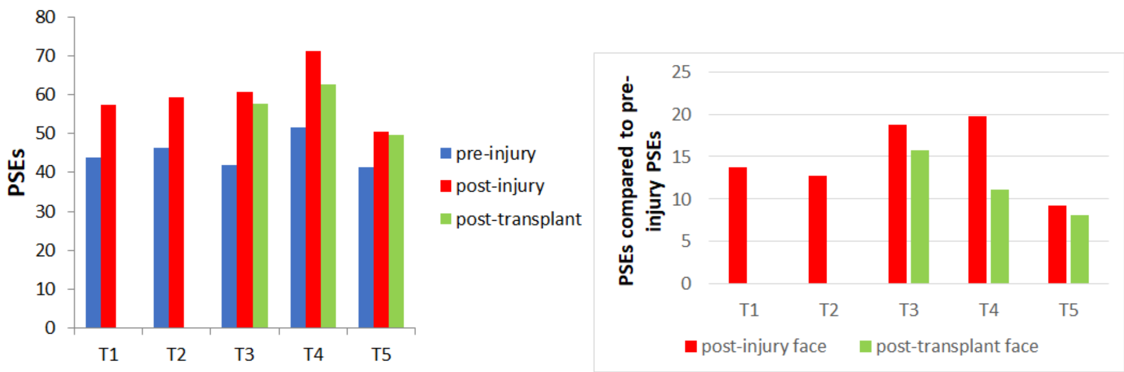

Figure S3. Absolute values of the Points of Subjective Equality (PSEs) for the identification of each self-face in each session (left panel). PSEs for the identification of the post-injury and post-transplant faces relative to the pre-injury face in each session (right panel).

Increased and decreased brain activity during self-perception through time

We investigated whether the observed different patterns of brain activity across the sessions were statistically different. Specifically, we were interested in identifying brain areas that were increasingly responsive to each self-face as the patient prepared himself to- (pre-transplant) and integrated (post-transplant) his new appearance. To this end, we created parametric contrasts to test for increased (and decreased) activations to the pre-injury and post-transplant faces from T1 to T5. Specifically, parametrical modulators were created to scale the amplitude of the HRFs of each session's contrasts reflecting the perception of self-face (vs other scale) to test for brain areas showing increased activity (or decreased activity using the inverse parametric modulation) throughout the sessions. The parametric modulation was created in such a way to give equivalent weights to the 2 pre-transplant sessions compared to the 3 post-transplant sessions (i.e. the weights given to each session in the contrast testing for increased in brain activity to the self-face across sessions were T1=-2; T2=-1; T3=0.5; T4=1; T5=1.5). For the post-transplant face, because there were only three sessions, fully parametric t-test contrasts could not be created as this would inevitably lead to the assignment of zero weight to the middle session T4. Therefore, we tested for increased activity between the specific pairs of sessions, i.e. T4>T3; T5>T4; T5>T3.

Detailed results can be found in Figure S4 and in the activation Table S4. In brief, results revealed a parametric increase in activity in several self-face processing brain areas, such as the right postcentral gyrus, right inferior frontal gyrus, occipital cortex and also anterior and posterior midline cortical regions, in the response to the perception of the pre-injury face. No significant activation was observed for the parametric contrast testing increasing activity in response to the post-transplant face. For the post-transplant face, we found increased activity in brain areas such as the postcentral gyri (all contrasts), occipital cortex (T4>T3) and midline anterior cortical regions (T5> T4 and T5>T3). Together, these results confirm the increasing responsiveness of self-face processing brain areas, including the anterior cingulate cortex, to the post-transplant face and support to the idea of increased integration of this new appearance. It also reveals increased responsivity to the pre-injury face but not to the post-injury face, possibly reflecting increasing identification with both pre-injury and post-transplant identities in contrast with decreasing with the post-injury face.

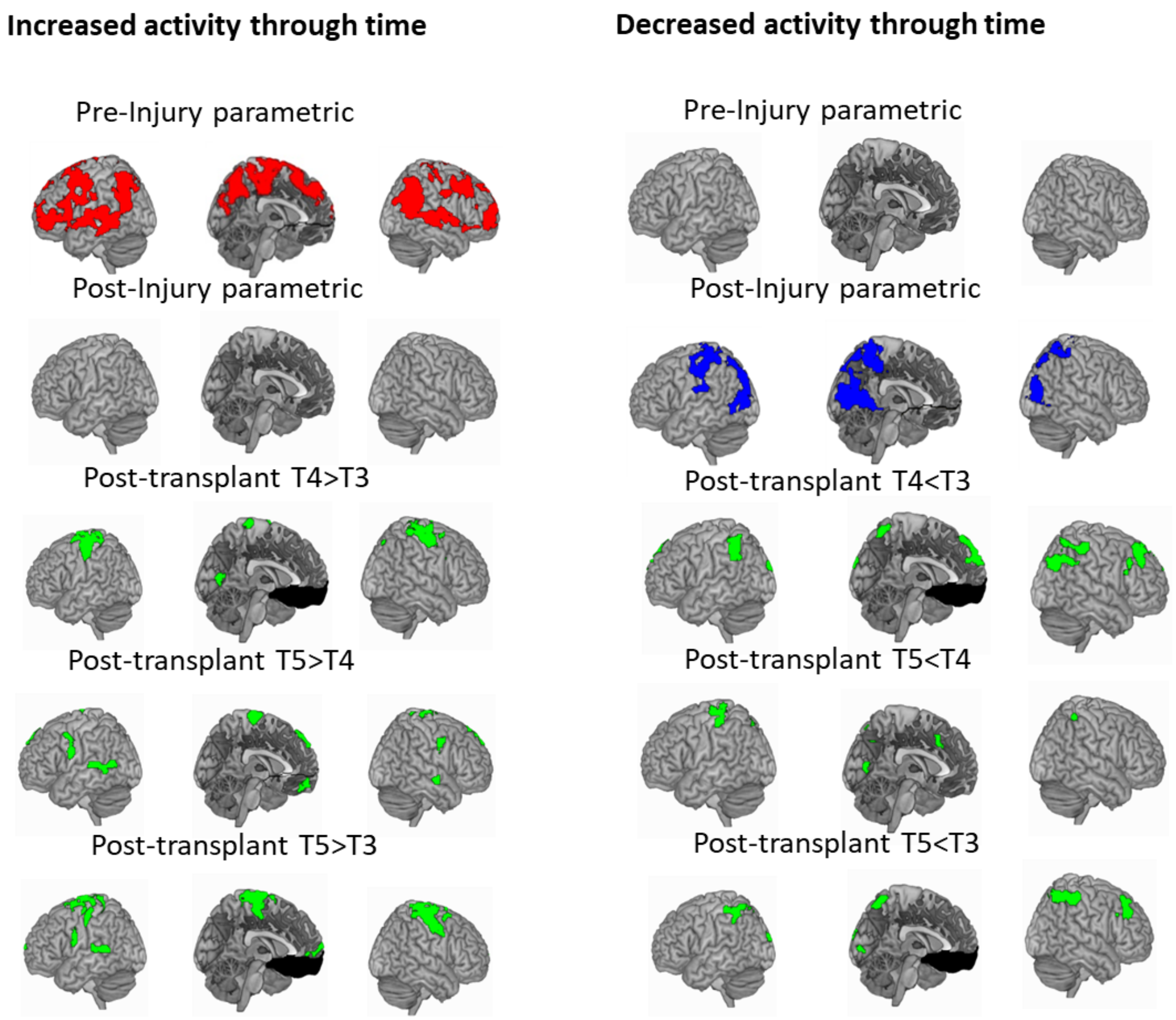

Figure S4. *BOLD responses associated with increased and decreased activity when looking at the three different faces (pre-injury, post-injury, post-transplant) through time. For this analysis we created parametric contrasts to unveil brain areas*

Activity in bilateral amygdala

The aim of the present study was to investigate the behaviour and neural underpinnings of self-face recognition and, therefore, it was not designed to explore the recipient's emotional reactions to the perception of each face. Nevertheless, given the likely strong affective responses associated with the different facial appearances, we have explored the patterns of activity in the amygdala, a brain region strongly involved in the processing of emotional and highly salient stimuli. Specifically, we applied small volume correction to the bilateral amygdala region (as defined by the AAL3 atlas https://www.gin.cnrs.fr/en/tools/aal/) to the following whole brain analyses without the data acquired at T3: Activation maps during the perception of each face (Figure 3; Table S1); Increased and decreased activity for through time (Figure 5; Table S4). No significant activity was found. The patterns of activity in this region during the perception of each face (Figure 3; Table S1) can be found in Figure S5.

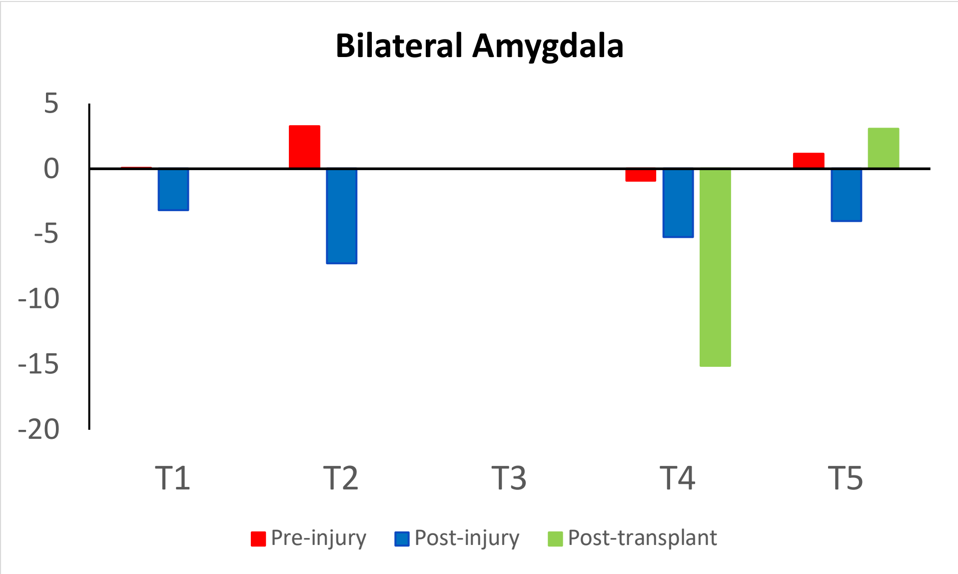

Figure S5. *Plots of parameter estimates for the observation of each self-face in the* bilateral amygdala (as defined by the AAL3 atlas https://www.gin.cnrs.fr/en/tools/aal/).

Image Artifact in T3

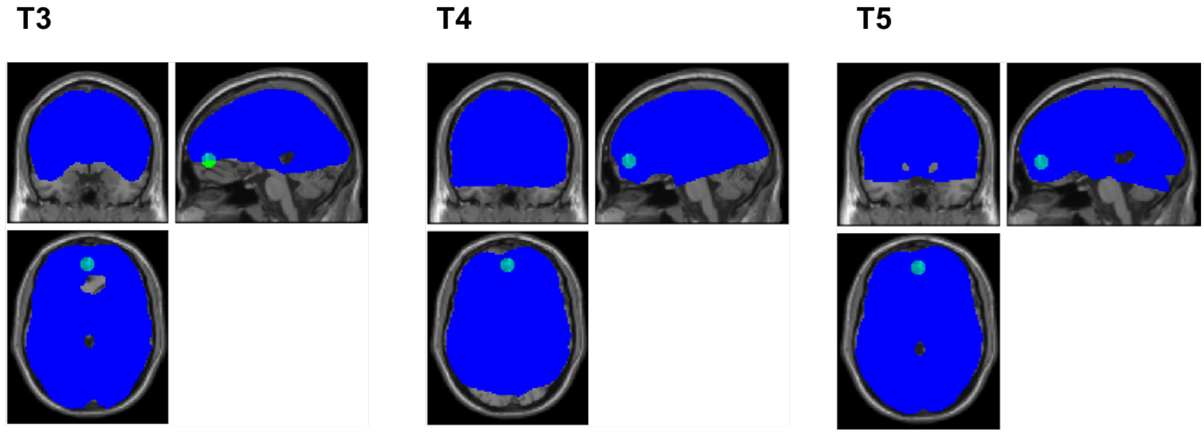

Figure S6: MRI safe hardware induced image artifacts over the rostral areas of the anterior prefrontal cortex. This includes orthodontic brackets with rubber bands to maintain occlusion, as well as rigid fixation on the zygomatic bodies using miniplates and bicortical positional lag screws in the bilateral mandible with additional plate fixation in the left mandible following non-union. Such artifacts were most pronounced at T3 and greatly mitigated at T4 and T5 with the removal of the orthodontic brackets and by changes in image acquisition parameters, specifically slice acquisition angle (T3: Transversal > Coronal -7.7^{o} > Sagittal 0.6^{o} ; T4= Transversal > Coronal -21^{o}; T5= Transversal > Coronal -13.1^{o} > Sagittal 1.1^{o}). The figures below show the binary masks (in blue) of each voxel included in the analyses for each scanning session. The region of interest (ROI) Anterior Cingulate Cortex (ACC), shown in green, partially overlaps with the affected region in T3 but not in T4 and T5.

Table S1: Activation maps during the perception of each face

Perception of the Pre-injury face at T1

Cluster 1 (252 vox): T1 pre-injury face (T> 2.58)

Maximum 01	T = 4.20	X / Y / Z =	20	-64	50	N/A			
Maximum 02	T = 4.10	X / Y / Z =	20	-66	54	N/A			
Maximum 03	T = 3.18	X / Y / Z =	16	-72	60	R Superior Parietal Lobule	-> Assigned to	right	Area 7P (SPL)

Cluster 2 (230 vox): T1 pre-injury face (T> 2.58)

Maximum 01	T = 3.61	X / Y / Z =	34	-76	24	R Middle Occipital Gyrus
Maximum 02	T = 3.36	X / Y / Z =	32	-78	28	R Middle Occipital Gyrus
Maximum 03	T = 3.34	X / Y / Z =	32	-88	20	R Middle Occipital Gyrus
Maximum 04	T = 3.28	X / Y / Z =	30	-88	26	R Middle Occipital Gyrus
Maximum 05	T = 2.96	X / Y / Z =	30	-82	22	R Middle Occipital Gyrus

Cluster 3 (164 vox): T1 pre-injury face (T> 2.58)

Maximum 01	T = 3.99	X / Y / Z =	-50	-70	0	L Inferior Temporal Gyrus

Cluster 4 (144 vox): T1 pre-injury face (T> 2.58)

Maximum 01	T = 3.67	X / Y / Z =	26	-56	70	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 02	T = 3.66	X / Y / Z =	34	-58	64	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 03	T = 3.59	X / Y / Z =	26	-58	66	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)

Perception of the Post-injury face at T1

Cluster 1 (11563 vox): T1 post-injury face (T> 2.58)

Maximum 01	T = 11.11	X / Y / Z =	-36	-86	8	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 02	T = 10.53	X / Y / Z =	36	-80	8	N/A			
Maximum 03	T = 10.23	X / Y / Z =	-30	-88	28	L Middle Occipital Gyrus			
Maximum 04	T = 9.67	X / Y / Z =	30	-60	66	R Superior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 05	T = 9.38	X / Y / Z =	-24	-54	54	L Superior Parietal Lobule			
Maximum 06	T = 8.56	X / Y / Z =	28	-66	52	R Angular Gyrus			

Maximum 07	T = 8.53	X / Y / Z =	28	-68	56	R Superior Parietal Lobule				
Maximum 08	T = 7.90	X / Y / Z =	-44	-48	64	L Inferior Parietal Lobule	-> Assigned to	left	Area 2	
Maximum 09	T = 7.76	X / Y / Z =	36	-78	22	R Middle Occipital Gyrus				
Maximum 10	T = 7.58	X / Y / Z =	30	-48	48	N/A	-> Assigned to	right	Area hIP3 (IPS)	
Maximum 11	T = 7.52	X / Y / Z =	28	-46	46	N/A	-> Assigned to	right	Area hIP3 (IPS)	

Cluster 2 (322 vox): T1 post-injury face (T> 2.58)

Maximum 01	T = 6.51	X / Y / Z =	48	8	32	R IFG (p. Opercularis)			

Cluster 3 (220 vox): T1 post-injury face (T> 2.58)

Maximum 01	T = 4.23	X / Y / Z =	46	46	24	R Middle Frontal Gyrus			
Maximum 02	T = 4.01	X / Y / Z =	46	36	26	R Middle Frontal Gyrus			
Maximum 03	T = 2.67	X / Y / Z =	52	42	18	R Middle Frontal Gyrus			

Cluster 4 (198 vox): T1 post-injury face (T> 2.58)

Maximum 01	T = 5.00	X / Y / Z =	-16	70	10	N/A			
Maximum 02	T = 4.08	X / Y / Z =	-6	70	24	N/A			
Maximum 03	T = 3.50	X / Y / Z =	-28	62	24	N/A			
Maximum 04	T = 3.49	X / Y / Z =	-8	72	18	N/A			
Maximum 05	T = 3.37	X / Y / Z =	-32	58	14	L Middle Frontal Gyrus	-> Assigned to	left	Area Fp1
Maximum 06	T = 3.10	X / Y / Z =	-26	60	8	L Middle Frontal Gyrus	-> Assigned to	left	Area Fp1

Cluster 5 (169 vox): T1 post-injury face (T> 2.58)

Maximum 01	T = 4.37	X / Y / Z =	-44	4	26	L IFG (p. Opercularis)			
Maximum 02	T = 4.15	X / Y / Z =	-48	6	34	L IFG (p. Opercularis)	-> Assigned to	left	Area 44

Cluster 6 (151 vox): T1 post-injury face (T> 2.58)

Maximum 01	T = 5.31	X / Y / Z =	26	-6	50	N/A

Perception of the Pre-injury face at T2

Cluster 1 (1557 vox): T2 pre-injury face (T> 2.58)

Maximum 01	T = 6.11	X / Y / Z =	-6	62	12	L Superior Medial Gyrus	-> Assigned to	left	Area Fp1
Maximum 02	T = 5.48	X / Y / Z =	-12	64	4	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp1

Maximum 03	T = 5.48	X / Y / Z =	-2	60	22	L Superior Medial Gyrus	-> Assigned to	left	Area Fp2
Maximum 04	T = 4.13	X / Y / Z =	-6	50	2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2
Maximum 05	T = 3.87	X / Y / Z =	10	66	0	R Superior Orbital Gyrus	-> Assigned to	right	Area Fp1
Maximum 06	T = 3.66	X / Y / Z =	-12	48	12	L Superior Medial Gyrus			
Maximum 07	T = 3.40	X / Y / Z =	20	56	28	R Superior Frontal Gyrus			
Maximum 08	T = 2.87	X / Y / Z =	8	62	28	R Superior Medial Gyrus			

Cluster 2 (1383 vox): T2 pre-injury face (T> 2.58)

Maximum 01	T = 4.46	X / Y / Z =	-8	-60	8	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 4.35	X / Y / Z =	-12	-60	14	L Calcarine Gyrus			
Maximum 03	T = 4.12	X / Y / Z =	-4	-62	16	L Precuneus			
Maximum 04	T = 4.07	X / Y / Z =	-6	-76	-4	L Cerebelum (VI)	-> Assigned to	left	Lobule VI (Hem)
Maximum 05	T = 3.94	X / Y / Z =	-4	-56	26	L Precuneus			
Maximum 06	T = 3.84	X / Y / Z =	-14	-66	20	L Calcarine Gyrus			
Maximum 07	T = 3.82	X / Y / Z =	-4	-72	-2	L Cerebelum (VI)	-> Assigned to	left	Lobule VI (Verm)
Maximum 08	T = 3.79	X / Y / Z =	-2	-60	20	L Precuneus			
Maximum 09	T = 3.74	X / Y / Z =	2	-60	18	N/A			
Maximum 10	T = 3.67	X / Y / Z =	6	-62	14	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 11	T = 3.67	X / Y / Z =	-24	-56	2	L Lingual Gyrus			

Cluster 3 (257 vox): T2 pre-injury face (T> 2.58)

Maximum 01	T = 3.65	X / Y / Z =	-46	-32	60	L Postcentral Gyrus	-> Assigned to	left	Area 3b
Maximum 02	T = 3.39	X / Y / Z =	-46	-30	50	L Inferior Parietal Lobule	-> Assigned to	left	Area 2
Maximum 03	T = 3.27	X / Y / Z =	-54	-26	54	L Inferior Parietal Lobule	-> Assigned to	left	Area 1

Cluster 4 (242 vox): T2 pre-injury face (T> 2.58)

Maximum 01	T = 3.96	X / Y / Z =	-46	-80	18	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 02	T = 3.60	X / Y / Z =	-48	-74	38	L Angular Gyrus	-> Assigned to	left	Area PGp (IPL)
Maximum 03	T = 3.52	X / Y / Z =	-46	-80	32	L Angular Gyrus	-> Assigned to	left	Area PGp (IPL)
Maximum 04	T = 2.70	X / Y / Z =	-40	-88	20	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp

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Perception of the Post-injury face at T2

Cluster 1 (2780 vox): T2 post-injury face (T> 2.58)

Maximum 01	T = 10.71	X / Y / Z =	36	-82	6	R Middle Occipital Gyrus			
Maximum 02	T = 6.06	X / Y / Z =	36	-76	18	N/A			
Maximum 03	T = 5.41	X / Y / Z =	44	-62	-8	R Inferior Temporal Gyrus	-> Assigned to	right	Area FG4
Maximum 04	T = 5.19	X / Y / Z =	30	-66	54	R Angular Gyrus	-> Assigned to	right	Area hIP3 (IPS)
Maximum 05	T = 5.16	X / Y / Z =	28	-68	52	R Angular Gyrus			
Maximum 06	T = 4.90	X / Y / Z =	30	-64	34	N/A			
Maximum 07	T = 4.39	X / Y / Z =	20	-74	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 08	T = 4.35	X / Y / Z =	18	-78	6	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 09	T = 4.32	X / Y / Z =	20	-66	46	R Superior Occipital Gyrus			
Maximum 10	T = 4.06	X / Y / Z =	36	-58	62	R Superior Parietal Lobule			
Maximum 11	T = 3.97	X / Y / Z =	32	-60	64	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)

Cluster 2 (1477 vox): T2 post-injury face (T> 2.58)

Maximum 01	T = 8.02	X / Y / Z =	-32	-88	6	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 02	T = 4.78	X / Y / Z =	-30	-90	28	L Middle Occipital Gyrus			
Maximum 03	T = 4.73	X / Y / Z =	-26	-74	54	L Superior Parietal Lobule			
Maximum 04	T = 4.69	X / Y / Z =	-24	-76	52	L Superior Parietal Lobule			
Maximum 05	T = 4.55	X / Y / Z =	-24	-78	44	L Superior Occipital Gyrus			
Maximum 06	T = 4.54	X / Y / Z =	-28	-78	32	L Middle Occipital Gyrus			
Maximum 07	T = 4.28	X / Y / Z =	-16	-78	-6	L Lingual Gyrus	-> Assigned to	left	Area hOc4v [V4(v)]
Maximum 08	T = 4.09	X / Y / Z =	-20	-66	64	L Superior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 09	T = 3.76	X / Y / Z =	-10	-86	-2	L Lingual Gyrus	-> Assigned to	left	Area hOc3v [V3v]
Maximum 10	T = 2.89	X / Y / Z =	-24	-68	-8	L Fusiform Gyrus	-> Assigned to	left	Area FG1

Cluster 3 (319 vox): T2 post-injury face (T> 2.58)

Maximum 01	T = 4.65	X / Y / Z =	50	38	14	R IFG (p. Triangularis)
Maximum 02	T = 4.57	X / Y / Z =	52	38	10	R IFG (p. Triangularis)
Maximum 03	T = 4.26	X / Y / Z =	48	44	16	R Middle Frontal Gyrus

Cluster 4 (297 vox): T2 post-injury face (T> 2.58)

Maximum 01	T = 5.13	X / Y / Z =	-40	-46	58	L Inferior Parietal Lobule	-> Assigned to	left	Area 2
Maximum 02	T = 4.61	X / Y / Z =	-26	-54	52	L Inferior Parietal Lobule			

Cluster 5 (211 vox): T2 post-injury face (T> 2.58)

Maximum 01	T = 4.98	X / Y / Z =	-42	-66	0	L Inferior Temporal Gyrus

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Perception of the Pre-injury face at T3

Cluster 1 (7269 vox): T3 pre-injury face (T> 2.58)

Maximum 01	T = 8.70	X / Y / Z =	2	-32	70	R Paracentral Lobule	-> Assigned to	right	Area 4a
Maximum 02	T = 8.10	X / Y / Z =	-6	-58	64	L Precuneus			
Maximum 03	T = 7.54	X / Y / Z =	-2	-44	68	L Precuneus	-> Assigned to	left	Area 4a
Maximum 04	T = 6.36	X / Y / Z =	4	-50	60	R Precuneus	-> Assigned to	right	Area 5M (SPL)
Maximum 05	T = 6.12	X / Y / Z =	44	-28	60	R Postcentral Gyrus	-> Assigned to	right	Area 1
Maximum 06	T = 6.05	X / Y / Z =	-34	-54	60	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP3 (IPS)
Maximum 07	T = 5.83	X / Y / Z =	30	-38	44	N/A			
Maximum 08	T = 5.80	X / Y / Z =	-28	-48	52	L Inferior Parietal Lobule	-> Assigned to	left	Area 5L (SPL)
Maximum 09	T = 5.63	X / Y / Z =	28	-64	58	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)
Maximum 10	T = 5.61	X / Y / Z =	10	-62	60	R Precuneus			
Maximum 11	T = 5.23	X / Y / Z =	-36	-30	64	L Precentral Gyrus	-> Assigned to	left	Area 4a

Cluster 2 (756 vox): T3 pre-injury face (T> 2.58)

Maximum 01	T = 5.41	X / Y / Z =	-28	48	-10	L Middle Orbital Gyrus			
Maximum 02	T = 5.04	X / Y / Z =	-38	62	-8	N/A			
Maximum 03	T = 4.46	X / Y / Z =	-30	66	-6	N/A			
Maximum 04	T = 4.21	X / Y / Z =	-34	58	14	L Middle Frontal Gyrus			
Maximum 05	T = 3.44	X / Y / Z =	-40	20	-16	L Temporal Pole			
Maximum 06	T = 3.38	X / Y / Z =	-32	32	-10	L IFG (p. Orbitalis)			
Maximum 07	T = 3.36	X / Y / Z =	-46	20	-16	L Temporal Pole			
Maximum 08	T = 3.19	X / Y / Z =	-42	52	-2	L Middle Orbital Gyrus			
Maximum 09	T = 3.08	X / Y / Z =	-26	46	2	L Superior Orbital Gyrus			
Maximum 10	T = 3.06	X / Y / Z =	-30	48	2	L Middle Orbital Gyrus	-> Assigned to	left	Area Fp1
Maximum 11	T = 2.93	X / Y / Z =	-30	54	4	L Superior Orbital Gyrus	-> Assigned to	left	Area Fp1

Cluster 3 (577 vox): T3 pre-injury face (T> 2.58)

Maximum 01	T = 5.29	X / Y / Z =	38	38	32	R Middle Frontal Gyrus
Maximum 02	T = 3.63	X / Y / Z =	26	48	30	R Middle Frontal Gyrus
Maximum 03	T = 3.43	X / Y / Z =	30	34	48	R Middle Frontal Gyrus
Maximum 04	T = 3.13	X / Y / Z =	14	24	48	N/A

Maximum 05	T = 3.06	X / Y / Z =	24	28	42	R Superior Frontal Gyrus			
Maximum 06	T = 2.99	X / Y / Z =	20	28	40	R Superior Frontal Gyrus			

Cluster 4 (500 vox): T3 pre-injury face (T> 2.58)

Maximum 01	T = 6.30	X / Y / Z =	-32	-94	12	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 02	T = 4.31	X / Y / Z =	-52	-80	4	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 03	T = 3.37	X / Y / Z =	-34	-78	16	L Middle Occipital Gyrus			
Maximum 04	T = 3.35	X / Y / Z =	-50	-72	-4	L Inferior Temporal Gyrus	-> Assigned to	left	Area hOc4la
Maximum 05	T = 3.05	X / Y / Z =	-56	-70	10	L Middle Temporal Gyrus			
Maximum 06	T = 2.92	X / Y / Z =	-48	-72	8	L Middle Temporal Gyrus	-> Assigned to	left	Area hOc5 [V5/MT]

Cluster 5 (332 vox): T3 pre-injury face (T> 2.58)

Maximum 01	T = 4.57	X / Y / Z =	38	-78	14	R Middle Occipital Gyrus
Maximum 02	T = 3.72	X / Y / Z =	36	-80	22	R Middle Occipital Gyrus
Maximum 03	T = 3.68	X / Y / Z =	36	-78	34	R Middle Occipital Gyrus
Maximum 04	T = 3.66	X / Y / Z =	38	-80	36	R Middle Occipital Gyrus
Maximum 05	T = 2.67	X / Y / Z =	34	-70	24	N/A

Cluster 6 (330 vox): T3 pre-injury face (T> 2.58)

Maximum 01	T = 7.43	X / Y / Z =	6	-92	0	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 02	T = 4.87	X / Y / Z =	-4	-76	-4	L Cerebelum (VI)	-> Assigned to	left	Lobule VI (Hem)
Maximum 03	T = 3.59	X / Y / Z =	4	-80	-4	Cerebellar Vermis (6)	-> Assigned to	right	Area hOc1 [V1]
Maximum 04	T = 2.74	X / Y / Z =	-12	-92	0	L Lingual Gyrus	-> Assigned to	left	Area hOc3v [V3v]

Perception of the Post-injury face at T3

Cluster 1 (4608 vox): T3 post-injury face (T> 2.58)

Maximum 01	T = 10.27	X / Y / Z =	32	-58	58	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 02	T = 9.40	X / Y / Z =	38	-80	14	R Middle Occipital Gyrus			
Maximum 03	T = 9.24	X / Y / Z =	38	-90	4	R Inferior Occipital Gyrus	-> Assigned to	right	Area hOc4lp
Maximum 04	T = 8.67	X / Y / Z =	30	-38	44	N/A			
Maximum 05	T = 8.43	X / Y / Z =	36	-68	24	N/A			
Maximum 06	T = 7.44	X / Y / Z =	36	-78	32	R Middle Occipital Gyrus			
Maximum 07	T = 7.21	X / Y / Z =	14	-66	60	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)
Maximum 08	T = 6.23	X / Y / Z =	32	-94	14	R Middle Occipital Gyrus	-> Assigned to	right	Area hOc4lp

Maximum 09 T = 5.92 X / Y / Z = 18 -98 8 R Calcarine Gyrus -> Assigned to right Area hOc1 [V1]
Maximum 10 T = 5.72 X / Y / Z = 30 -54 40 N/A -> Assigned to right Area hIP1 (IPS)
Maximum 11 T = 5.71 X / Y / Z = 52 -34 56 R Inferior Parietal Lobule -> Assigned to right Area 1

Cluster 2 (2802 vox): T3 post-injury face (T> 2.58)
Maximum 01 T = 8.18 X / Y / Z = -32 -92 12 L Middle Occipital Gyrus -> Assigned to left Area hOc4lp
Maximum 02 T = 8.04 X / Y / Z = -40 -92 6 L Middle Occipital Gyrus -> Assigned to left Area hOc4lp
Maximum 03 T = 8.01 X / Y / Z = -30 -88 14 L Middle Occipital Gyrus -> Assigned to left Area hOc4lp
Maximum 04 T = 7.78 X / Y / Z = -16 -94 24 L Middle Occipital Gyrus -> Assigned to left Area hOc4d [V3A]
Maximum 05 T = 7.65 X / Y / Z = -8 -98 16 L Calcarine Gyrus -> Assigned to left Area hOc2 [V2]
Maximum 06 T = 6.18 X / Y / Z = -30 -86 30 L Middle Occipital Gyrus
Maximum 07 T = 6.17 X / Y / Z = -32 -88 26 L Middle Occipital Gyrus
Maximum 08 T = 5.86 X / Y / Z = -6 -92 4 L Calcarine Gyrus -> Assigned to left Area hOc1 [V1]
Maximum 09 T = 5.11 X / Y / Z = -38 -74 -4 L Inferior Occipital Gyrus -> Assigned to left Area FG2
Maximum 10 T = 4.75 X / Y / Z = -26 -60 36 N/A
Maximum 11 T = 4.31 X / Y / Z = -42 -68 -6 L Inferior Occipital Gyrus -> Assigned to left Area FG2

Cluster 3 (614 vox): T3 post-injury face (T> 2.58)
Maximum 01 T = 6.80 X / Y / Z = 48 42 16 R Middle Frontal Gyrus
Maximum 02 T = 4.91 X / Y / Z = 44 54 8 R Middle Frontal Gyrus
Maximum 03 T = 4.83 X / Y / Z = 42 42 28 R Middle Frontal Gyrus
Maximum 04 T = 3.03 X / Y / Z = 52 46 4 R IFG (p. Triangularis)
Maximum 05 T = 2.76 X / Y / Z = 34 68 2 N/A

Cluster 4 (344 vox): T3 post-injury face (T> 2.58)
Maximum 01 T = 6.20 X / Y / Z = -42 -40 54 L Postcentral Gyrus -> Assigned to left Area 2
Maximum 02 T = 3.73 X / Y / Z = -30 -48 54 L Inferior Parietal Lobule -> Assigned to left Area 5L (SPL)

Perception of the Post-transplant face at T3

Cluster 1 (5356 vox): T3 post-transplant face (T> 2.58)
Maximum 01 T = 9.58 X / Y / Z = 34 -60 58 R Inferior Parietal Lobule -> Assigned to right Area hIP3 (IPS)
Maximum 02 T = 8.32 X / Y / Z = 52 -34 56 R Inferior Parietal Lobule -> Assigned to right Area 1

Maximum 03	T = 8.05	X / Y / Z =	14	-66	58	R Superior Parietal Lobule			
Maximum 04	T = 7.48	X / Y / Z =	-44	-44	56	L Inferior Parietal Lobule			
Maximum 06	T = 6.48	X / Y / Z =	-8	-64	60	L Precuneus			
Maximum 07	T = 6.43	X / Y / Z =	-6	-62	62	L Precuneus			
Maximum 08	T = 6.21	X / Y / Z =	-34	-56	60	L Inferior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 09	T = 5.71	X / Y / Z =	44	-52	56	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 10	T = 5.69	X / Y / Z =	38	-76	34	R Middle Occipital Gyrus			
Maximum 11	T = 5.58	X / Y / Z =	46	-48	54	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP2 (IPS)

Cluster 2 (3915 vox): T3 post-transplant face (T> 2.58)

Maximum 01	T = 10.56	X / Y / Z =	28	34	50	R Middle Frontal Gyrus
Maximum 02	T = 7.93	X / Y / Z =	36	36	40	R Middle Frontal Gyrus
Maximum 03	T = 7.71	X / Y / Z =	0	62	30	L Superior Medial Gyrus
Maximum 04	T = 7.44	X / Y / Z =	40	38	36	R Middle Frontal Gyrus
Maximum 05	T = 6.08	X / Y / Z =	48	18	24	R IFG (p. Triangularis)
Maximum 06	T = 6.01	X / Y / Z =	44	18	28	R IFG (p. Triangularis)
Maximum 07	T = 5.71	X / Y / Z =	2	50	26	L Superior Medial Gyrus
Maximum 08	T = 5.47	X / Y / Z =	0	30	36	L ACC
Maximum 09	T = 5.04	X / Y / Z =	-24	36	46	L Superior Frontal Gyrus
Maximum 10	T = 4.90	X / Y / Z =	-2	42	26	L Superior Medial Gyrus
Maximum 11	T = 4.86	X / Y / Z =	4	40	52	R Superior Medial Gyrus

Cluster 3 (1580 vox): T3 post-transplant face (T> 2.58)

Maximum 01	T = 6.45	X / Y / Z =	-14	-92	8	N/A	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 6.35	X / Y / Z =	-16	-94	24	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 03	T = 5.59	X / Y / Z =	-32	-94	10	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 04	T = 5.33	X / Y / Z =	-10	-96	14	L Superior Occipital Gyrus			
Maximum 05	T = 5.32	X / Y / Z =	6	-88	-2	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 06	T = 5.11	X / Y / Z =	-38	-92	6	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 07	T = 5.00	X / Y / Z =	-40	-90	4	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 08	T = 3.81	X / Y / Z =	-30	-84	30	L Middle Occipital Gyrus			
Maximum 09	T = 3.56	X / Y / Z =	-48	-80	2	L Inferior Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 10	T = 3.49	X / Y / Z =	-32	-74	18	N/A			
Maximum 11	T = 3.32	X / Y / Z =	-34	-78	20	L Middle Occipital Gyrus			

Cluster 4 (757 vox): T3 post-transplant face (T> 2.58)

Maximum 01	T = 4.87	X / Y / Z =	50	40	12	R Middle Frontal Gyrus			
Maximum 02	T = 4.47	X / Y / Z =	42	46	10	R Middle Frontal Gyrus			
Maximum 03	T = 4.19	X / Y / Z =	48	20	-14	R Temporal Pole			
Maximum 04	T = 3.89	X / Y / Z =	44	22	4	R IFG (p. Triangularis)			
Maximum 05	T = 3.66	X / Y / Z =	56	26	-4	R IFG (p. Orbitalis)			
Maximum 06	T = 3.61	X / Y / Z =	50	42	0	R IFG (p. Orbitalis)			
Maximum 07	T = 3.44	X / Y / Z =	42	50	0	R Middle Orbital Gyrus			

Cluster 5 (225 vox): T3 post-transplant face (T> 2.58)

Maximum 01	T = 3.96	X / Y / Z =	16	6	16	R Caudate Nucleus			
Maximum 02	T = 3.90	X / Y / Z =	16	12	12	R Caudate Nucleus			
Maximum 03	T = 3.90	X / Y / Z =	14	14	10	R Caudate Nucleus			

Cluster 6 (219 vox): T3 post-transplant face (T> 2.58)

Maximum 01	T = 4.45	X / Y / Z =	-44	22	38	L Middle Frontal Gyrus			
Maximum 02	T = 3.53	X / Y / Z =	-42	10	18	L IFG (p. Opercularis)			

Cluster 7 (193 vox): T3 post-transplant face (T> 2.58)

Maximum 01	T = 4.82	X / Y / Z =	58	-58	38	R Angular Gyrus	-> Assigned to	right	Area PFm (IPL)
Maximum 02	T = 4.80	X / Y / Z =	62	-52	36	R SupraMarginal Gyrus	-> Assigned to	right	Area PFm (IPL)

Perception of the Pre-injury face at T4

Cluster 1 (2077 vox): T4 pre-injury face (T> 2.58)

Maximum 01	T = 4.66	X / Y / Z =	56	-52	28	R Superior Temporal Gyrus	-> Assigned to	right	Area PFm (IPL)
Maximum 02	T = 4.61	X / Y / Z =	56	-64	36	R Angular Gyrus	-> Assigned to	right	Area PGa (IPL)
Maximum 03	T = 4.51	X / Y / Z =	46	-56	50	R Inferior Parietal Lobule	-> Assigned to	right	Area PGa (IPL)
Maximum 04	T = 4.43	X / Y / Z =	50	-42	58	R Inferior Parietal Lobule	-> Assigned to	right	Area PFm (IPL)
Maximum 05	T = 4.31	X / Y / Z =	54	-52	34	R SupraMarginal Gyrus	-> Assigned to	right	Area PFm (IPL)
Maximum 06	T = 3.86	X / Y / Z =	38	-66	56	R Angular Gyrus	-> Assigned to	right	Area hIP3 (IPS)
Maximum 07	T = 3.82	X / Y / Z =	38	-68	42	R Angular Gyrus			
Maximum 08	T = 3.65	X / Y / Z =	40	-82	30	R Middle Occipital Gyrus			
Maximum 09	T = 3.64	X / Y / Z =	42	-80	28	R Middle Occipital Gyrus			

Maximum 10	T = 3.53	X / Y / Z =	46	-78	28	R Middle Temporal Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 11	T = 3.50	X / Y / Z =	36	-42	40	N/A			

Cluster 2 (1326 vox): T4 pre-injury face (T> 2.58)

Maximum 01	T = 4.88	X / Y / Z =	42	10	36	R IFG (p. Opercularis)			
Maximum 02	T = 4.52	X / Y / Z =	28	22	60	R Superior Frontal Gyrus			
Maximum 03	T = 4.47	X / Y / Z =	34	10	30	N/A			
Maximum 04	T = 3.93	X / Y / Z =	38	26	54	R Middle Frontal Gyrus			
Maximum 05	T = 3.69	X / Y / Z =	40	22	28	R Middle Frontal Gyrus			
Maximum 06	T = 3.65	X / Y / Z =	44	4	60	R Middle Frontal Gyrus			
Maximum 07	T = 3.62	X / Y / Z =	42	24	34	R IFG (p. Triangularis)			
Maximum 08	T = 3.57	X / Y / Z =	48	10	48	R Middle Frontal Gyrus			
Maximum 09	T = 3.56	X / Y / Z =	42	26	38	R Middle Frontal Gyrus			
Maximum 10	T = 3.49	X / Y / Z =	36	20	26	N/A			
Maximum 11	T = 3.40	X / Y / Z =	36	26	32	R IFG (p. Triangularis)			

Cluster 3 (1073 vox): T4 pre-injury face (T> 2.58)

Maximum 01	T = 5.70	X / Y / Z =	34	64	0	N/A			
Maximum 02	T = 4.49	X / Y / Z =	22	72	8	N/A			
Maximum 03	T = 4.39	X / Y / Z =	40	50	12	R Middle Frontal Gyrus			
Maximum 04	T = 4.17	X / Y / Z =	18	68	2	N/A			
Maximum 05	T = 3.73	X / Y / Z =	20	72	0	N/A			
Maximum 06	T = 3.50	X / Y / Z =	8	64	0	R Mid Orbital Gyrus	-> Assigned to	right	Area Fp1
Maximum 07	T = 3.18	X / Y / Z =	40	40	16	R Middle Frontal Gyrus			

Cluster 4 (369 vox): T4 pre-injury face (T> 2.58)

Maximum 01	T = 4.67	X / Y / Z =	36	24	-8	R IFG (p. Orbitalis)			
Maximum 02	T = 3.77	X / Y / Z =	38	18	8	R Insula Lobe			
Maximum 03	T = 3.71	X / Y / Z =	46	20	6	R IFG (p. Triangularis)			
Maximum 04	T = 3.67	X / Y / Z =	42	20	6	R Insula Lobe			

Cluster 5 (262 vox): T4 pre-injury face (T> 2.58)

Maximum 01	T = 3.98	X / Y / Z =	60	-38	4	R Middle Temporal Gyrus			
Maximum 02	T = 3.43	X / Y / Z =	60	-28	12	R Superior Temporal Gyrus			
Maximum 03	T = 3.29	X / Y / Z =	62	-18	16	R Superior Temporal Gyrus	-> Assigned to	right	Area OP1 [SII]

Maximum 04	T = 3.22	X / Y / Z =	64	-26	14	R Superior Temporal Gyrus			
Maximum 05	T = 3.21	X / Y / Z =	66	-16	-8	R Middle Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 06	T = 3.01	X / Y / Z =	66	-24	-2	R Middle Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 07	T = 2.86	X / Y / Z =	66	-18	-18	R Middle Temporal Gyrus			

Cluster 6 (208 vox): T4 pre-injury face (T> 2.58)

Maximum 01	T = 5.62	X / Y / Z =	2	-30	38	R MCC
Maximum 02	T = 2.67	X / Y / Z =	8	-42	36	R PCC

Perception of the Post-injury face at T4

Cluster 1 (1529 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 7.39	X / Y / Z =	32	-70	56	R Superior Parietal Lobule			
Maximum 02	T = 7.10	X / Y / Z =	30	-48	44	N/A			
Maximum 03	T = 4.44	X / Y / Z =	42	-54	60	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 04	T = 4.34	X / Y / Z =	40	-56	62	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 05	T = 4.17	X / Y / Z =	48	-42	60	R Inferior Parietal Lobule	-> Assigned to	right	Area 1
Maximum 06	T = 3.94	X / Y / Z =	32	-56	68	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 07	T = 3.56	X / Y / Z =	28	-64	36	N/A			
Maximum 08	T = 2.93	X / Y / Z =	46	-40	44	R SupraMarginal Gyrus	-> Assigned to	right	Area hIP2 (IPS)

Cluster 2 (646 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 5.90	X / Y / Z =	46	12	30	R IFG (p. Triangularis)
Maximum 02	T = 5.38	X / Y / Z =	38	8	30	R IFG (p. Opercularis)

Cluster 3 (414 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 4.30	X / Y / Z =	42	42	20	R Middle Frontal Gyrus
Maximum 02	T = 3.75	X / Y / Z =	46	40	26	R Middle Frontal Gyrus
Maximum 03	T = 3.04	X / Y / Z =	54	28	26	R IFG (p. Triangularis)

Cluster 4 (370 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 4.94	X / Y / Z =	34	-80	8	N/A
Maximum 02	T = 3.43	X / Y / Z =	36	-76	24	N/A
Maximum 03	T = 3.21	X / Y / Z =	40	-80	20	R Middle Occipital Gyrus

Cluster 5 (340 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 3.70	X / Y / Z =	48	20	6	R IFG (p. Triangularis)	-> Assigned to	right	Area 45
Maximum 02	T = 3.61	X / Y / Z =	42	24	-10	R IFG (p. Orbitalis)			
Maximum 03	T = 3.42	X / Y / Z =	34	24	-4	R IFG (p. Orbitalis)			

Cluster 6 (251 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 4.20	X / Y / Z =	-36	-86	10	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 02	T = 3.51	X / Y / Z =	-36	-88	18	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 03	T = 3.27	X / Y / Z =	-28	-88	30	L Middle Occipital Gyrus			

Cluster 7 (193 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 4.76	X / Y / Z =	46	48	-6	R Middle Orbital Gyrus			

Cluster 8 (177 vox): T4 post-injury face (T> 2.58)

Maximum 01	T = 4.53	X / Y / Z =	-26	-54	52	L Inferior Parietal Lobule			
Maximum 02	T = 2.59	X / Y / Z =	-38	-48	52	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP3 (IPS)

Perception of the Post-transplant face at T4

Cluster 1 (2196 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 6.88	X / Y / Z =	28	-48	42	N/A			
Maximum 02	T = 6.77	X / Y / Z =	34	-82	8	N/A			
Maximum 03	T = 5.15	X / Y / Z =	28	-66	48	R Angular Gyrus			
Maximum 04	T = 4.81	X / Y / Z =	32	-74	20	N/A			
Maximum 05	T = 4.65	X / Y / Z =	28	-64	38	N/A			
Maximum 06	T = 4.56	X / Y / Z =	36	-82	22	R Middle Occipital Gyrus			
Maximum 07	T = 4.52	X / Y / Z =	16	-78	50	R Precuneus			
Maximum 08	T = 3.69	X / Y / Z =	14	-64	32	R Precuneus			
Maximum 09	T = 3.27	X / Y / Z =	40	-40	42	N/A	-> Assigned to	right	Area hIP2 (IPS)
Maximum 10	T = 2.77	X / Y / Z =	36	-60	62	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)

Cluster 2 (1401 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 5.12	X / Y / Z =	-20	-70	52	L Superior Parietal Lobule			
Maximum 02	T = 5.01	X / Y / Z =	-16	-76	54	L Superior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)

Maximum 03	T = 4.87	X / Y / Z =	-34	-86	6	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 04	T = 4.56	X / Y / Z =	-14	-62	34	L Cuneus			
Maximum 05	T = 4.53	X / Y / Z =	-26	-54	52	L Inferior Parietal Lobule			
Maximum 06	T = 4.29	X / Y / Z =	-36	-90	14	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 07	T = 4.09	X / Y / Z =	-34	-88	18	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 08	T = 3.89	X / Y / Z =	-28	-76	32	L Middle Occipital Gyrus			
Maximum 09	T = 3.86	X / Y / Z =	-26	-74	34	L Middle Occipital Gyrus			
Maximum 10	T = 3.72	X / Y / Z =	-28	-86	36	L Middle Occipital Gyrus			
Maximum 11	T = 3.69	X / Y / Z =	-28	-82	34	L Middle Occipital Gyrus			

Cluster 3 (1311 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 4.25	X / Y / Z =	14	-58	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 02	T = 4.12	X / Y / Z =	4	-68	12	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 03	T = 4.12	X / Y / Z =	-4	-74	10	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 04	T = 4.07	X / Y / Z =	8	-66	10	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 05	T = 4.06	X / Y / Z =	24	-58	6	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 06	T = 4.01	X / Y / Z =	0	-76	10	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 07	T = 3.91	X / Y / Z =	20	-60	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 08	T = 3.91	X / Y / Z =	10	-44	2	R Lingual Gyrus			
Maximum 09	T = 3.89	X / Y / Z =	-16	-54	6	L Lingual Gyrus			
Maximum 10	T = 3.82	X / Y / Z =	14	-80	8	R Calcarine Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 11	T = 3.73	X / Y / Z =	-20	-72	10	L Calcarine Gyrus	-> Assigned to	left	Area hOc1 [V1]

Cluster 4 (852 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 5.55	X / Y / Z =	4	24	34	R ACC
Maximum 02	T = 4.91	X / Y / Z =	0	22	44	L Superior Medial Gyrus
Maximum 03	T = 3.63	X / Y / Z =	8	32	22	R ACC
Maximum 04	T = 3.17	X / Y / Z =	-2	38	20	L ACC
Maximum 05	T = 3.14	X / Y / Z =	0	42	16	L ACC
Maximum 06	T = 3.05	X / Y / Z =	-4	42	8	L ACC
Maximum 07	T = 3.02	X / Y / Z =	0	44	12	L ACC

Cluster 5 (578 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 5.24	X / Y / Z =	0	-28	36	R MCC
Maximum 02	T = 4.77	X / Y / Z =	0	-34	42	L MCC

Maximum 03	T = 3.56	X / Y / Z =	2	-38	22	N/A			
Maximum 04	T = 3.27	X / Y / Z =	-4	-38	24	N/A			

Cluster 6 (387 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 6.02	X / Y / Z =	48	8	28	R IFG (p. Opercularis)

Cluster 7 (293 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 4.63	X / Y / Z =	36	20	4	R Insula Lobe
Maximum 02	T = 4.24	X / Y / Z =	34	24	-4	R IFG (p. Orbitalis)
Maximum 03	T = 3.98	X / Y / Z =	32	24	0	R IFG (p. Orbitalis)

Cluster 8 (220 vox): T4 post-transplant face (T> 2.58)

Maximum 01	T = 4.64	X / Y / Z =	44	46	20	R Middle Frontal Gyrus
Maximum 02	T = 3.28	X / Y / Z =	46	30	20	R IFG (p. Triangularis)
Maximum 03	T = 2.83	X / Y / Z =	46	36	28	R Middle Frontal Gyrus
Maximum 04	T = 2.70	X / Y / Z =	38	32	20	R Middle Frontal Gyrus

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Perception of the Pre-injury face at T5

Cluster 1 (35707 vox): T5 pre-injury face (T> 2.58)

Maximum 01	T = 8.41	X / Y / Z =	14	-42	76	R Postcentral Gyrus	-> Assigned to	right	Area 4a
Maximum 02	T = 7.99	X / Y / Z =	-22	-10	78	L Superior Frontal Gyrus			
Maximum 03	T = 7.46	X / Y / Z =	0	-18	62	L Posterior-Medial Frontal			
Maximum 04	T = 7.34	X / Y / Z =	6	-12	72	R Posterior-Medial Frontal			
Maximum 05	T = 7.05	X / Y / Z =	-4	-40	54	L MCC	-> Assigned to	left	Area 5M (SPL)
Maximum 06	T = 7.00	X / Y / Z =	-16	-26	76	L Paracentral Lobule	-> Assigned to	left	Area 4a
Maximum 07	T = 6.96	X / Y / Z =	-54	-68	18	L Middle Temporal Gyrus			
Maximum 08	T = 6.80	X / Y / Z =	18	-24	72	RPrecentral Gyrus			
Maximum 09	T = 6.63	X / Y / Z =	-28	10	62	L Middle Frontal Gyrus			
Maximum 10	T = 6.23	X / Y / Z =	12	-40	64	R Paracentral Lobule			
Maximum 11	T = 6.20	X / Y / Z =	-46	12	52	L Middle Frontal Gyrus			

Cluster 2 (1316 vox): T5 pre-injury face (T> 2.58)

Maximum 01	T = 5.08	X / Y / Z =	-12	70	24	N/A

Maximum 02	T = 4.92	X / Y / Z =	-8	72	18	N/A				
Maximum 03	T = 4.59	X / Y / Z =	-14	58	40	L Superior Frontal Gyrus				
Maximum 04	T = 4.56	X / Y / Z =	-14	58	36	L Superior Medial Gyrus				
Maximum 05	T = 4.55	X / Y / Z =	-10	70	6	N/A				
Maximum 06	T = 4.46	X / Y / Z =	-12	44	46	L Superior Frontal Gyrus				
Maximum 07	T = 4.46	X / Y / Z =	6	66	36	N/A				
Maximum 08	T = 4.31	X / Y / Z =	-2	66	14	L Superior Medial Gyrus	-> Assigned to	left	Area Fp1	
Maximum 09	T = 4.29	X / Y / Z =	-4	64	18	L Superior Medial Gyrus	-> Assigned to	left	Area Fp1	
Maximum 10	T = 4.23	X / Y / Z =	10	68	32	N/A				
Maximum 11	T = 3.57	X / Y / Z =	-2	62	-2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp1	

Cluster 3 (1151 vox): T5 pre-injury face (T> 2.58)

Maximum 01	T = 5.33	X / Y / Z =	62	-10	4	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 02	T = 4.88	X / Y / Z =	70	-26	8	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 03	T = 3.81	X / Y / Z =	60	6	-2	R Temporal Pole	-> Assigned to	right	Area TE 3
Maximum 04	T = 3.72	X / Y / Z =	60	12	-4	R Temporal Pole	-> Assigned to	right	Area TE 3
Maximum 05	T = 3.70	X / Y / Z =	62	2	2	R Temporal Pole	-> Assigned to	right	Area TE 3
Maximum 06	T = 3.66	X / Y / Z =	54	-34	0	R Middle Temporal Gyrus			
Maximum 07	T = 3.54	X / Y / Z =	58	16	-6	R Temporal Pole			
Maximum 08	T = 3.40	X / Y / Z =	54	20	-10	R Temporal Pole			
Maximum 09	T = 3.15	X / Y / Z =	52	-22	-2	R Superior Temporal Gyrus			
Maximum 10	T = 3.11	X / Y / Z =	52	20	-14	R Temporal Pole			
Maximum 11	T = 2.78	X / Y / Z =	48	-14	2	R Superior Temporal Gyrus			

Perception of the Post-injury face at T5

No significant activations

Perception of the Post-transplant face at T5

Cluster 1 (2092 vox): T5 post-transplant face (T> 2.58)

Maximum 01	T = 6.75	X / Y / Z =	2	62	40	N/A
Maximum 02	T = 6.32	X / Y / Z =	0	50	50	L Superior Medial Gyrus

Maximum 03	T = 6.16	X / Y / Z =	-4	72	12	N/A				
Maximum 04	T = 5.15	X / Y / Z =	4	38	58	R Superior Medial Gyrus				
Maximum 05	T = 4.97	X / Y / Z =	6	40	56	R Superior Medial Gyrus				
Maximum 06	T = 4.16	X / Y / Z =	-4	48	0	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2	
Maximum 07	T = 3.94	X / Y / Z =	-2	60	2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2	
Maximum 08	T = 3.90	X / Y / Z =	-2	54	-2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2	
Maximum 09	T = 3.88	X / Y / Z =	12	68	32	N/A				
Maximum 10	T = 3.81	X / Y / Z =	2	54	24	L Superior Medial Gyrus				
Maximum 11	T = 3.81	X / Y / Z =	-12	68	28	N/A				

Cluster 2 (1200 vox): T5 post-transplant face (T> 2.58)

Maximum 01	T = 6.62	X / Y / Z =	-6	-16	78	L Posterior-Medial Frontal			
Maximum 02	T = 5.57	X / Y / Z =	14	-22	78	RPrecentral Gyrus			
Maximum 03	T = 4.73	X / Y / Z =	10	-40	76	R Paracentral Lobule	-> Assigned to	right	Area 4a
Maximum 04	T = 4.58	X / Y / Z =	2	-8	76	R Posterior-Medial Frontal			
Maximum 05	T = 3.91	X / Y / Z =	-4	-20	68	L Posterior-Medial Frontal			
Maximum 06	T = 3.86	X / Y / Z =	0	-18	66	L Posterior-Medial Frontal			
Maximum 07	T = 3.21	X / Y / Z =	4	-22	50	R MCC			
Maximum 08	T = 2.85	X / Y / Z =	-4	-20	46	L MCC			
Maximum 09	T = 2.78	X / Y / Z =	6	4	76	R Posterior-Medial Frontal			

Cluster 3 (225 vox): T5 post-transplant face (T> 2.58)

Maximum 01	T = 4.07	X / Y / Z =	36	-88	24	R Middle Occipital Gyrus			
Maximum 02	T = 2.89	X / Y / Z =	42	-84	10	R Middle Occipital Gyrus	-> Assigned to	right	Area hOc4la

Table S2: Direct comparison of activation maps for each face

Pre-surgery sessions: Pre-Injury > Post-Injury

Cluster 1 (1253 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 5.58	X / Y / Z =	-2	58	20	L Superior Medial Gyrus	-> Assigned to	left	Area Fp2
Maximum 02	T = 5.09	X / Y / Z =	2	56	16	R Superior Medial Gyrus	-> Assigned to	left	Area Fp2
Maximum 03	T = 4.64	X / Y / Z =	20	56	28	R Superior Frontal Gyrus			
Maximum 04	T = 4.12	X / Y / Z =	0	56	0	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2
Maximum 05	T = 3.91	X / Y / Z =	10	64	30	R Superior Medial Gyrus			
Maximum 06	T = 3.43	X / Y / Z =	-12	66	4	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp1
Maximum 07	T = 3.38	X / Y / Z =	-8	66	2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp1
Maximum 08	T = 3.28	X / Y / Z =	-4	46	0	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2
Maximum 09	T = 3.28	X / Y / Z =	-6	44	4	L ACC			

Cluster 2 (302 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 4.31	X / Y / Z =	42	-70	34	R Middle Occipital Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 02	T = 3.98	X / Y / Z =	46	-68	28	R Middle Temporal Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 03	T = 3.75	X / Y / Z =	48	-70	26	R Middle Temporal Gyrus	-> Assigned to	right	Area PGp (IPL)

Cluster 3 (267 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 4.81	X / Y / Z =	-44	-80	34	L Middle Occipital Gyrus	-> Assigned to	left	Area PGp (IPL)
Maximum 02	T = 4.51	X / Y / Z =	-44	-82	26	L Middle Occipital Gyrus	-> Assigned to	left	Area PGp (IPL)
Maximum 03	T = 4.46	X / Y / Z =	-46	-82	22	L Middle Occipital Gyrus	-> Assigned to	left	Area PGp (IPL)
Maximum 04	T = 3.29	X / Y / Z =	-54	-70	18	L Middle Temporal Gyrus			
Maximum 05	T = 3.26	X / Y / Z =	-50	-72	20	L Middle Temporal Gyrus			

Cluster 4 (229 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 4.32	X / Y / Z =	60	6	-16	R Medial Temporal Pole			
Maximum 02	T = 4.14	X / Y / Z =	60	-6	-10	R Middle Temporal Gyrus	-> Assigned to	right	Area TE 3

Cluster 5 (175 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 4.27	X / Y / Z =	58	-34	2	R Middle Temporal Gyrus

Maximum 02 T = 4.20 X / Y / Z = 62 -34 4 R Middle Temporal Gyrus

Cluster 6 (166 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01 T = 4.13 X / Y / Z = 2 -54 20 N/A

Cluster 7 (146 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01 T = 4.20 X / Y / Z = 62 -50 12 R Middle Temporal Gyrus
Maximum 02 T = 3.57 X / Y / Z = 50 -44 14 R Middle Temporal Gyrus

Cluster 8 (124 vox): Pre-surgery: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01 T = 4.56 X / Y / Z = 8 -50 42 R MCC

Pre-surgery sessions: Post-Injury > Pre-Injury

Cluster 1 (3087 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01 T = 8.01 X / Y / Z = -36 -86 6 L Middle Occipital Gyrus -> Assigned to left Area hOc4la
Maximum 02 T = 7.48 X / Y / Z = -26 -54 52 L Inferior Parietal Lobule
Maximum 03 T = 7.46 X / Y / Z = -44 -50 62 L Inferior Parietal Lobule
Maximum 04 T = 6.20 X / Y / Z = -28 -88 28 L Middle Occipital Gyrus
Maximum 05 T = 5.13 X / Y / Z = -20 -72 56 L Superior Parietal Lobule -> Assigned to left Area 7A (SPL)
Maximum 06 T = 4.90 X / Y / Z = -20 -80 46 L Superior Occipital Gyrus
Maximum 07 T = 4.15 X / Y / Z = -8 -70 60 L Precuneus -> Assigned to left Area 7A (SPL)
Maximum 08 T = 3.18 X / Y / Z = -48 -52 42 L Inferior Parietal Lobule
Maximum 09 T = 3.12 X / Y / Z = -38 -44 40 N/A -> Assigned to left Area hIP1 (IPS)
Maximum 10 T = 3.10 X / Y / Z = -8 -66 38 L Precuneus
Maximum 11 T = 3.05 X / Y / Z = -14 -66 42 L Precuneus

Cluster 2 (2899 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01 T = 7.92 X / Y / Z = 38 -84 8 R Middle Occipital Gyrus -> Assigned to right Area hOc4la
Maximum 02 T = 6.02 X / Y / Z = 30 -68 56 R Superior Parietal Lobule
Maximum 03 T = 5.14 X / Y / Z = 40 -58 60 R Inferior Parietal Lobule -> Assigned to right Area hIP3 (IPS)
Maximum 04 T = 5.13 X / Y / Z = 32 -60 64 R Superior Parietal Lobule -> Assigned to right Area 7A (SPL)
Maximum 05 T = 5.05 X / Y / Z = 26 -48 44 N/A
Maximum 06 T = 5.03 X / Y / Z = 30 -48 46 N/A

Maximum 07	T = 5.03	X / Y / Z =	32	-50	48	N/A				
Maximum 08	T = 5.01	X / Y / Z =	18	-76	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 09	T = 4.28	X / Y / Z =	16	-60	2	R Lingual Gyrus	-> Assigned to	right	Area hOc2 [V2]
Maximum 10	T = 4.28	X / Y / Z =	28	-92	4	R Middle Occipital Gyrus			
Maximum 11	T = 4.25	X / Y / Z =	34	-54	-12	R Fusiform Gyrus	-> Assigned to	right	Area FG3

Cluster 3 (804 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 4.55	X / Y / Z =	46	34	18	R IFG (p. Triangularis)			
Maximum 02	T = 4.47	X / Y / Z =	44	30	46	R Middle Frontal Gyrus			
Maximum 03	T = 4.43	X / Y / Z =	42	28	48	R Middle Frontal Gyrus			
Maximum 04	T = 4.40	X / Y / Z =	46	44	22	R Middle Frontal Gyrus			
Maximum 05	T = 3.96	X / Y / Z =	44	34	36	R Middle Frontal Gyrus			
Maximum 06	T = 3.85	X / Y / Z =	44	10	26	N/A			
Maximum 07	T = 3.82	X / Y / Z =	46	8	28	R IFG (p. Triangularis)			
Maximum 08	T = 3.73	X / Y / Z =	46	36	32	R Middle Frontal Gyrus			
Maximum 09	T = 3.59	X / Y / Z =	44	18	38	R Middle Frontal Gyrus			

Cluster 4 (558 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 5.47	X / Y / Z =	44	58	0	N/A			
Maximum 02	T = 5.17	X / Y / Z =	38	62	2	N/A			
Maximum 03	T = 3.99	X / Y / Z =	26	66	12	N/A			
Maximum 04	T = 3.64	X / Y / Z =	28	52	4	R Superior Orbital Gyrus	-> Assigned to	right	Area Fp1
Maximum 05	T = 2.89	X / Y / Z =	44	56	14	N/A			

Cluster 5 (537 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 4.99	X / Y / Z =	-2	20	50	L Superior Medial Gyrus
Maximum 02	T = 4.67	X / Y / Z =	4	28	42	R MCC
Maximum 03	T = 4.48	X / Y / Z =	0	30	42	L Superior Medial Gyrus
Maximum 04	T = 4.30	X / Y / Z =	2	42	38	L Superior Medial Gyrus

Cluster 6 (318 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 4.03	X / Y / Z =	-40	4	38	L Precentral Gyrus			
Maximum 02	T = 3.67	X / Y / Z =	-44	4	26	L IFG (p. Opercularis)			
Maximum 03	T = 3.33	X / Y / Z =	-30	6	34	N/A			
Maximum 04	T = 2.93	X / Y / Z =	-50	6	32	L IFG (p. Opercularis)	-> Assigned to	left	Area 44

Maximum 05	T = 2.63	X / Y / Z =	-54	4	30	L IFG (p. Opercularis)	-> Assigned to	left	Area 44

Cluster 7 (225 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 4.46	X / Y / Z =	-16	-78	-6	L Lingual Gyrus	-> Assigned to	left	Area hOc4v [V4(v)]
Maximum 02	T = 4.07	X / Y / Z =	-10	-86	-2	L Lingual Gyrus	-> Assigned to	left	Area hOc3v [V3v]
Maximum 03	T = 3.83	X / Y / Z =	-14	-78	8	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 04	T = 2.82	X / Y / Z =	-4	-76	14	L Calcarine Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 05	T = 2.79	X / Y / Z =	0	-74	12	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]

Cluster 8 (220 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 3.93	X / Y / Z =	-52	26	24	L IFG (p. Triangularis)	-> Assigned to	left	Area 45
Maximum 02	T = 3.34	X / Y / Z =	-48	38	18	L IFG (p. Triangularis)			
Maximum 03	T = 3.21	X / Y / Z =	-46	34	20	L IFG (p. Triangularis)			
Maximum 04	T = 3.15	X / Y / Z =	-52	36	10	L IFG (p. Triangularis)			

Cluster 9 (195 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 3.95	X / Y / Z =	-46	4	56	L Precentral Gyrus
Maximum 02	T = 3.51	X / Y / Z =	-50	14	48	L Middle Frontal Gyrus
Maximum 03	T = 3.42	X / Y / Z =	-48	16	46	L Middle Frontal Gyrus

Cluster 10 (168 vox): Pre-surgery: Post-Injury > Pre-Injury (T> 2.58)

Maximum 01	T = 4.13	X / Y / Z =	-42	42	0	L Middle Orbital Gyrus
Maximum 02	T = 3.07	X / Y / Z =	-48	48	-8	N/A

Post-transplant sessions: Pre-Injury > Post-Injury

Cluster 1 (8741 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)

Maximum 01	T = 5.81	X / Y / Z =	-20	-20	74	L Precentral Gyrus			
Maximum 02	T = 5.73	X / Y / Z =	-32	-34	62	L Precentral Gyrus	-> Assigned to	left	Area 4p
Maximum 03	T = 5.67	X / Y / Z =	-34	-32	64	L Precentral Gyrus	-> Assigned to	left	Area 4a
Maximum 04	T = 5.47	X / Y / Z =	-18	-12	76	L Superior Frontal Gyrus			
Maximum 05	T = 5.29	X / Y / Z =	12	-28	72	R Paracentral Lobule			
Maximum 06	T = 5.20	X / Y / Z =	38	-26	64	RPrecentral Gyrus			
Maximum 07	T = 5.15	X / Y / Z =	46	-24	58	R Postcentral Gyrus	-> Assigned to	right	Area 1

Maximum 08	T = 5.06	X / Y / Z =	20	-40	74	R Postcentral Gyrus	-> Assigned to	right	Area 4a
Maximum 09	T = 4.65	X / Y / Z =	-10	-32	76	L Paracentral Lobule	-> Assigned to	left	Area 4a
Maximum 10	T = 4.63	X / Y / Z =	36	-40	64	R Postcentral Gyrus	-> Assigned to	right	Area 3b
Maximum 11	T = 4.43	X / Y / Z =	-34	-16	66	L Precentral Gyrus			

Cluster 2 (1052 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)

Maximum 01	T = 4.12	X / Y / Z =	54	-70	16	R Middle Temporal Gyrus			
Maximum 02	T = 3.99	X / Y / Z =	54	-76	14	R Middle Temporal Gyrus	-> Assigned to	right	Area hOc4la
Maximum 03	T = 3.90	X / Y / Z =	60	-56	10	R Middle Temporal Gyrus			
Maximum 04	T = 3.88	X / Y / Z =	62	-58	8	R Middle Temporal Gyrus			
Maximum 05	T = 3.84	X / Y / Z =	62	-62	6	R Middle Temporal Gyrus			
Maximum 06	T = 3.72	X / Y / Z =	46	-60	30	R Angular Gyrus	-> Assigned to	right	Area PGa (IPL)
Maximum 07	T = 3.58	X / Y / Z =	44	-60	16	R Middle Temporal Gyrus			
Maximum 08	T = 3.38	X / Y / Z =	46	-52	10	N/A			
Maximum 09	T = 3.22	X / Y / Z =	44	-72	38	R Angular Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 10	T = 3.06	X / Y / Z =	46	-54	6	N/A			
Maximum 11	T = 2.96	X / Y / Z =	50	-54	2	R Inferior Temporal Gyrus			

Cluster 3 (603 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)

Maximum 01	T = 4.03	X / Y / Z =	-54	-70	18	L Middle Temporal Gyrus			
Maximum 02	T = 3.82	X / Y / Z =	-54	-70	12	L Middle Temporal Gyrus			
Maximum 03	T = 3.65	X / Y / Z =	-56	-74	10	N/A	-> Assigned to	left	Area hOc4la
Maximum 04	T = 3.49	X / Y / Z =	-46	-64	20	L Middle Temporal Gyrus			
Maximum 05	T = 3.33	X / Y / Z =	-44	-52	10	N/A			
Maximum 06	T = 3.23	X / Y / Z =	-42	-58	22	L Middle Temporal Gyrus			
Maximum 07	T = 2.89	X / Y / Z =	-52	-46	12	L Middle Temporal Gyrus			
Maximum 08	T = 2.69	X / Y / Z =	-50	-50	10	L Middle Temporal Gyrus			

Cluster 4 (598 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)

Maximum 01	T = 4.30	X / Y / Z =	62	6	-4	R Temporal Pole	-> Assigned to	right	Area TE 3
Maximum 02	T = 3.93	X / Y / Z =	58	-34	2	R Middle Temporal Gyrus			
Maximum 03	T = 3.73	X / Y / Z =	64	-32	4	R Middle Temporal Gyrus			
Maximum 04	T = 3.68	X / Y / Z =	66	-30	6	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 05	T = 3.66	X / Y / Z =	64	-14	12	R Superior Temporal Gyrus	-> Assigned to	right	Area OP4 [PV]
Maximum 06	T = 3.61	X / Y / Z =	66	-8	8	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3

Maximum 07 T = 2.77 X / Y / Z = 56 -4 0 R Superior Temporal Gyrus -> Assigned to right Area TE 1.2

Cluster 5 (401 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)
Maximum 01 T = 4.20 X / Y / Z = -66 -34 0 L Middle Temporal Gyrus
Maximum 02 T = 3.96 X / Y / Z = -66 -26 10 L Superior Temporal Gyrus -> Assigned to left Area TE 3
Maximum 03 T = 3.95 X / Y / Z = -64 -10 6 L Superior Temporal Gyrus -> Assigned to left Area TE 3
Maximum 04 T = 3.46 X / Y / Z = -60 -34 10 L Middle Temporal Gyrus
Maximum 05 T = 3.45 X / Y / Z = -62 -32 8 L Middle Temporal Gyrus
Maximum 06 T = 3.07 X / Y / Z = -68 -42 -6 L Middle Temporal Gyrus

Cluster 6 (197 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)
Maximum 01 T = 4.15 X / Y / Z = -38 -12 34 N/A

Cluster 7 (178 vox): Post-transplant: Pre-Injury > Post-transplant(T> 2.58)
Maximum 01 T = 3.82 X / Y / Z = 4 -66 24 R Calcarine Gyrus
Maximum 02 T = 3.40 X / Y / Z = 12 -60 22 R Precuneus

Post-transplant sessions: Pre-Injury > Post-Injury

Cluster 1 (41672 vox): Post-transplant: Pre-Injury > Post-Injury (T> 2.58)
Maximum 01 T = 8.31 X / Y / Z = 0 -52 54 L Precuneus
Maximum 02 T = 7.99 X / Y / Z = -4 -46 66 L Precuneus -> Assigned to left Area 5M (SPL)
Maximum 03 T = 7.40 X / Y / Z = 4 -30 70 R Paracentral Lobule -> Assigned to right Area 4a
Maximum 04 T = 7.39 X / Y / Z = 2 -28 68 R Posterior-Medial Frontal -> Assigned to right Area 4a
Maximum 05 T = 7.18 X / Y / Z = 2 -42 44 R MCC
Maximum 06 T = 7.13 X / Y / Z = -64 -10 6 L Superior Temporal Gyrus -> Assigned to left Area TE 3
Maximum 07 T = 6.90 X / Y / Z = -36 -32 64 L Precentral Gyrus -> Assigned to left Area 4a
Maximum 08 T = 6.73 X / Y / Z = -34 12 56 L Middle Frontal Gyrus
Maximum 09 T = 6.70 X / Y / Z = 62 6 -4 R Temporal Pole -> Assigned to right Area TE 3
Maximum 10 T = 6.64 X / Y / Z = -14 -60 20 L Precuneus
Maximum 11 T = 6.59 X / Y / Z = 44 -24 62 R Precentral Gyrus

Cluster 2 (943 vox): Post-transplant: Pre-Injury > Post-Injury (T> 2.58)
Maximum 01 T = 4.08 X / Y / Z = -40 50 -2 L Middle Orbital Gyrus

Maximum 02	T = 4.01	X / Y / Z =	-36	48	0	L Middle Orbital Gyrus			
Maximum 03	T = 3.89	X / Y / Z =	-32	48	0	L Middle Orbital Gyrus	-> Assigned to	left	Area Fp1
Maximum 04	T = 3.83	X / Y / Z =	-40	54	-6	L Middle Orbital Gyrus			
Maximum 05	T = 3.82	X / Y / Z =	-42	58	-8	N/A			
Maximum 06	T = 3.74	X / Y / Z =	-24	64	-4	N/A			
Maximum 07	T = 3.68	X / Y / Z =	18	62	22	R Superior Frontal Gyrus	-> Assigned to	right	Area Fp1
Maximum 08	T = 3.65	X / Y / Z =	18	58	22	R Superior Frontal Gyrus	-> Assigned to	right	Area Fp1
Maximum 09	T = 3.60	X / Y / Z =	-22	64	0	N/A	-> Assigned to	left	Area Fp1
Maximum 10	T = 3.55	X / Y / Z =	0	70	22	N/A			
Maximum 11	T = 3.55	X / Y / Z =	-10	70	6	N/A			

Cluster 3 (238 vox): Post-transplant: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 3.75	X / Y / Z =	6	52	32	R Superior Medial Gyrus
Maximum 02	T = 3.72	X / Y / Z =	8	56	32	R Superior Medial Gyrus
Maximum 03	T = 3.10	X / Y / Z =	0	50	40	L Superior Medial Gyrus
Maximum 04	T = 2.61	X / Y / Z =	0	44	48	L Superior Medial Gyrus

Cluster 4 (91 vox): Post-transplant: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 3.77	X / Y / Z =	-6	-6	12	N/A	-> Assigned to	left	Thal: Temporal
Maximum 02	T = 2.87	X / Y / Z =	14	-12	14	R Thalamus	-> Assigned to	right	Thal: Prefrontal

Cluster 5 (88 vox): Post-transplant: Pre-Injury > Post-Injury (T> 2.58)

Maximum 01	T = 3.40	X / Y / Z =	-16	20	4	L Caudate Nucleus

Post-transplant sessions: Post-injury > Pre-Injury

No significant activations

Post-transplant sessions: Post-injury > Post-transplant

No significant activations

Post-transplant sessions: Post-transplant > Pre-Injury

Cluster 1 (315 vox): Post-transplant: Post-transplant > Pre-Injury (T> 2.58)

Maximum 01	T = 3.90	X / Y / Z =	-4	40	16	L ACC			
Maximum 02	T = 3.64	X / Y / Z =	0	30	38	L Superior Medial Gyrus			
Maximum 03	T = 3.13	X / Y / Z =	-4	38	24	L ACC			

Post-transplant sessions: Post-transplant > Post-injury

Cluster 1 (9410 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)

Maximum 01	T = 5.93	X / Y / Z =	-6	-48	0	L Cerebelum (IV-V)	-> Assigned to	left	Lobule I IV (Hem)
Maximum 02	T = 5.84	X / Y / Z =	-8	-54	4	L Cerebelum (IV-V)	-> Assigned to	left	Lobule V (Hem)
Maximum 03	T = 5.83	X / Y / Z =	-16	-70	54	L Superior Parietal Lobule			
Maximum 04	T = 5.73	X / Y / Z =	-10	-58	14	L Calcarine Gyrus			
Maximum 05	T = 5.63	X / Y / Z =	-2	-54	54	L Precuneus			
Maximum 06	T = 5.54	X / Y / Z =	-40	-70	42	L Angular Gyrus	-> Assigned to	left	Area PGp (IPL)
Maximum 07	T = 5.46	X / Y / Z =	-2	-36	44	L MCC			
Maximum 08	T = 5.38	X / Y / Z =	0	-40	44	L MCC			
Maximum 09	T = 5.23	X / Y / Z =	14	-54	12	R Precuneus			
Maximum 10	T = 5.23	X / Y / Z =	-4	-50	66	L Precuneus	-> Assigned to	left	Area 5M (SPL)
Maximum 11	T = 5.13	X / Y / Z =	10	-54	8	R Lingual Gyrus			

Cluster 2 (5664 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)

Maximum 01	T = 5.84	X / Y / Z =	-24	36	48	L Superior Frontal Gyrus			
Maximum 02	T = 5.45	X / Y / Z =	-44	22	42	L Middle Frontal Gyrus			
Maximum 03	T = 5.38	X / Y / Z =	-34	14	56	L Middle Frontal Gyrus			
Maximum 04	T = 5.20	X / Y / Z =	-24	20	60	L Middle Frontal Gyrus			
Maximum 05	T = 5.03	X / Y / Z =	2	30	40	L Superior Medial Gyrus			
Maximum 06	T = 4.77	X / Y / Z =	-20	64	2	L Superior Orbital Gyrus	-> Assigned to	left	Area Fp1
Maximum 07	T = 4.62	X / Y / Z =	-2	56	40	L Superior Medial Gyrus			
Maximum 08	T = 4.61	X / Y / Z =	-4	42	22	L ACC			
Maximum 09	T = 4.52	X / Y / Z =	-2	40	26	L Superior Medial Gyrus			
Maximum 10	T = 4.36	X / Y / Z =	2	36	56	L Superior Medial Gyrus			
Maximum 11	T = 4.33	X / Y / Z =	-2	42	0	L Mid Orbital Gyrus			

Cluster 3 (943 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)
Maximum 01 T = 6.01 X / Y / Z = 30 34 48 R Middle Frontal Gyrus
Maximum 02 T = 4.10 X / Y / Z = 44 32 34 R Middle Frontal Gyrus
Maximum 03 T = 3.92 X / Y / Z = 42 34 36 R Middle Frontal Gyrus
Maximum 04 T = 3.79 X / Y / Z = 46 22 30 R IFG (p. Triangularis)
Maximum 05 T = 3.56 X / Y / Z = 44 24 28 R Middle Frontal Gyrus
Maximum 06 T = 3.19 X / Y / Z = 42 26 22 R IFG (p. Triangularis)

Cluster 4 (402 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)
Maximum 01 T = 3.75 X / Y / Z = -56 -16 10 L Superior Temporal Gyrus
Maximum 02 T = 3.39 X / Y / Z = -62 -8 4 L Superior Temporal Gyrus -> Assigned to left Area TE 3
Maximum 03 T = 3.21 X / Y / Z = -60 -24 16 L Superior Temporal Gyrus -> Assigned to left Area OP1 [SII]
Maximum 04 T = 3.01 X / Y / Z = -62 -18 20 L Postcentral Gyrus -> Assigned to left Area OP4 [PV]
Maximum 05 T = 2.84 X / Y / Z = -62 -22 22 L Postcentral Gyrus -> Assigned to left Area OP1 [SII]

Cluster 5 (248 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)
Maximum 01 T = 4.07 X / Y / Z = 60 -24 42 R Postcentral Gyrus -> Assigned to right Area PFt (IPL)
Maximum 02 T = 3.51 X / Y / Z = 58 -10 44 R Postcentral Gyrus
Maximum 03 T = 3.03 X / Y / Z = 66 -32 34 R SupraMarginal Gyrus -> Assigned to right Area PF (IPL)
Maximum 04 T = 2.91 X / Y / Z = 56 2 38 RPrecentral Gyrus
Maximum 05 T = 2.90 X / Y / Z = 54 4 40 RPrecentral Gyrus
Maximum 06 T = 2.85 X / Y / Z = 58 -2 40 RPrecentral Gyrus

Cluster 6 (241 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)
Maximum 01 T = 4.12 X / Y / Z = 56 -64 30 R Angular Gyrus -> Assigned to right Area PGp (IPL)
Maximum 02 T = 3.89 X / Y / Z = 48 -70 32 R Middle Occipital Gyrus -> Assigned to right Area PGp (IPL)
Maximum 03 T = 3.58 X / Y / Z = 46 -68 40 R Angular Gyrus -> Assigned to right Area PGp (IPL)

Cluster 7 (182 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)
Maximum 01 T = 3.70 X / Y / Z = 14 14 8 R Caudate Nucleus
Maximum 02 T = 3.66 X / Y / Z = 10 14 2 R Caudate Nucleus

Cluster 8 (172 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)
Maximum 01 T = 4.00 X / Y / Z = -52 -42 42 L Inferior Parietal Lobule -> Assigned to left Area PF (IPL)

Maximum 02	T = 3.40	X / Y / Z =	-58	-28	38	L SupraMarginal Gyrus	-> Assigned to	left	Area PFt (IPL)

Cluster 9 (157 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)

Maximum 01	T = 3.29	X / Y / Z =	-42	-2	8	L Insula Lobe
Maximum 02	T = 3.16	X / Y / Z =	-40	0	-2	L Insula Lobe
Maximum 03	T = 3.09	X / Y / Z =	-42	0	2	L Insula Lobe
Maximum 04	T = 2.92	X / Y / Z =	-50	4	-8	L Temporal Pole

Cluster 10 (156 vox): Post-transplant sessions: Post-transplant > Post-injury (T> 2.58)

Maximum 01	T = 4.03	X / Y / Z =	-50	16	-12	L Temporal Pole
Maximum 02	T = 3.24	X / Y / Z =	-42	18	-20	L Temporal Pole
Maximum 03	T = 3.11	X / Y / Z =	-44	16	-18	L Temporal Pole
Maximum 04	T = 2.96	X / Y / Z =	-36	20	-12	L IFG (p. Orbitalis)
Maximum 05	T = 2.83	X / Y / Z =	-38	18	-14	L Temporal Pole

Table S3: Activation maps for the recognition of each face

Recognition of the Pre-injury face at T1

Cluster 1 (360 vox): T1: Pre-injury (T> 2.58)

Maximum 01	T = 4.25	X / Y / Z =	20	-68	52	R Superior Occipital Gyrus			
Maximum 02	T = 4.24	X / Y / Z =	18	-72	58	R Superior Parietal Lobule	-> Assigned to	right	Area 7P (SPL)

Recognition of the Post-injury face at T1

Cluster 1 (9971 vox): T1 : Post-injury (T> 2.58)

Maximum 01	T = 9.06	X / Y / Z =	-34	-86	8	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 02	T = 8.49	X / Y / Z =	36	-80	8	N/A			
Maximum 03	T = 8.44	X / Y / Z =	-30	-90	26	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 04	T = 7.24	X / Y / Z =	28	-68	54	R Angular Gyrus			
Maximum 05	T = 7.16	X / Y / Z =	30	-60	66	R Superior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 06	T = 7.13	X / Y / Z =	-24	-54	54	L Superior Parietal Lobule			
Maximum 07	T = 6.79	X / Y / Z =	38	-80	20	R Middle Occipital Gyrus			
Maximum 08	T = 6.75	X / Y / Z =	20	-78	52	R Precuneus			
Maximum 09	T = 6.68	X / Y / Z =	26	-74	54	R Superior Parietal Lobule			
Maximum 10	T = 6.06	X / Y / Z =	-42	-46	64	L Postcentral Gyrus	-> Assigned to	left	Area 2
Maximum 11	T = 6.04	X / Y / Z =	26	-48	46	N/A			

Cluster 2 (263 vox): T1 : Post-injury (T> 2.58)

Maximum 01	T = 5.72	X / Y / Z =	46	46	24	R Middle Frontal Gyrus
Maximum 02	T = 2.91	X / Y / Z =	42	56	16	R Middle Frontal Gyrus

Cluster 3 (211 vox): T1 : Post-injury (T> 2.58)

Maximum 01	T = 5.14	X / Y / Z =	44	6	30	R IFG (p. Opercularis)
Maximum 02	T = 5.12	X / Y / Z =	48	8	32	R IFG (p. Opercularis)

Cluster 4 (189 vox): T1 : Post-injury (T> 2.58)

Maximum 01	T = 4.15	X / Y / Z =	-16	70	10	N/A			
Maximum 02	T = 3.89	X / Y / Z =	-36	60	12	N/A			
Maximum 03	T = 3.81	X / Y / Z =	-24	62	10	L Superior Frontal Gyrus	-> Assigned to	left	Area Fp1

Maximum 04	T = 2.84	X / Y / Z =	-8	72	18	N/A			

Recognition of the Pre-injury face at T2

Cluster 1 (1988 vox): T2 : Pre-injury (T> 2.58)

Maximum 01	T = 5.50	X / Y / Z =	-2	58	20	L Superior Medial Gyrus	-> Assigned to	left	Area Fp2
Maximum 02	T = 5.28	X / Y / Z =	-2	60	12	L Superior Medial Gyrus	-> Assigned to	left	Area Fp2
Maximum 03	T = 5.21	X / Y / Z =	-6	54	18	L Superior Medial Gyrus	-> Assigned to	left	Area Fp2
Maximum 04	T = 4.92	X / Y / Z =	-4	38	56	L Superior Medial Gyrus			
Maximum 05	T = 4.80	X / Y / Z =	-16	64	4	L Superior Medial Gyrus	-> Assigned to	left	Area Fp1
Maximum 06	T = 4.63	X / Y / Z =	-6	44	4	L ACC			
Maximum 07	T = 4.21	X / Y / Z =	-4	50	-2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2
Maximum 08	T = 3.71	X / Y / Z =	20	56	28	R Superior Frontal Gyrus			
Maximum 09	T = 3.71	X / Y / Z =	18	58	26	R Superior Frontal Gyrus			
Maximum 10	T = 3.64	X / Y / Z =	-20	50	34	L Superior Frontal Gyrus			
Maximum 11	T = 3.37	X / Y / Z =	-12	48	12	L Superior Medial Gyrus			

Cluster 2 (580 vox): T2 : Pre-injury (T> 2.58)

Maximum 01	T = 4.78	X / Y / Z =	-10	-60	14	L Calcarine Gyrus			
Maximum 02	T = 3.60	X / Y / Z =	-4	-56	26	L : Pre-injurycuneus			
Maximum 03	T = 2.81	X / Y / Z =	-8	-50	4	L Cerebelum (IV-V)			

Cluster 3 (90 vox): T2 : Pre-injury (T> 2.58)

Maximum 01	T = 3.39	X / Y / Z =	-8	-102	20	L Cuneus	-> Assigned to	left	Area hOc2 [V2]
Maximum 02	T = 3.31	X / Y / Z =	-16	-100	20	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc3d [V3d]
Maximum 03	T = 3.30	X / Y / Z =	-12	-100	18	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc3d [V3d]
Maximum 04	T = 2.97	X / Y / Z =	-18	-96	22	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 05	T = 2.75	X / Y / Z =	-24	-98	22	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc3d [V3d]

Recognition of the Post-injury face at T2

Cluster 1 (905 vox): T2 : Post-injury (T> 2.58)

Maximum 01	T = 7.46	X / Y / Z =	36	-80	6	N/A			
Maximum 02	T = 4.39	X / Y / Z =	36	-76	18	N/A			

Maximum 03	T = 3.52	X / Y / Z =	34	-90	26	R Middle Occipital Gyrus				
Maximum 04	T = 3.37	X / Y / Z =	24	-58	4	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 05	T = 3.34	X / Y / Z =	20	-74	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 06	T = 3.04	X / Y / Z =	16	-60	2	R Lingual Gyrus	-> Assigned to	right	Area hOc2 [V2]
Maximum 07	T = 2.84	X / Y / Z =	28	-96	6	R Middle Occipital Gyrus	-> Assigned to	right	Area hOc4lp

Cluster 2 (437 vox): T2: Post-injury (T> 2.58)

Maximum 01	T = 5.99	X / Y / Z =	-32	-88	6	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 02	T = 5.90	X / Y / Z =	-28	-86	4	L Inferior Occipital Gyrus			
Maximum 03	T = 4.12	X / Y / Z =	-18	-78	-6	L Lingual Gyrus	-> Assigned to	left	Area hOc4v [V4(v)]
Maximum 04	T = 3.54	X / Y / Z =	-20	-80	-4	L Lingual Gyrus	-> Assigned to	left	Area hOc4v [V4(v)]

Recognition of the Pre-injury face at T3

Cluster 1 (14217 vox): T3: Pre-injury (T> 2.58)

Maximum 01	T = 9.23	X / Y / Z =	-36	-16	64	L Precentral Gyrus			
Maximum 02	T = 8.23	X / Y / Z =	-34	-28	68	L Precentral Gyrus			
Maximum 03	T = 7.99	X / Y / Z =	46	-24	60	R Postcentral Gyrus	-> Assigned to	right	Area 1
Maximum 04	T = 7.97	X / Y / Z =	44	-26	62	R Postcentral Gyrus			
Maximum 05	T = 7.77	X / Y / Z =	-28	-26	72	L Precentral Gyrus			
Maximum 06	T = 7.23	X / Y / Z =	0	-32	68	L Paracentral Lobule	-> Assigned to	right	Area 4a
Maximum 07	T = 6.96	X / Y / Z =	-22	-20	74	L Precentral Gyrus			
Maximum 08	T = 6.78	X / Y / Z =	-52	-20	52	L Postcentral Gyrus	-> Assigned to	left	Area 1
Maximum 09	T = 6.73	X / Y / Z =	-54	-18	50	L Postcentral Gyrus	-> Assigned to	left	Area 4a
Maximum 10	T = 6.45	X / Y / Z =	4	-48	54	R Precuneus			
Maximum 11	T = 6.07	X / Y / Z =	-18	-12	76	L Superior Frontal Gyrus			

Cluster 2 (324 vox): T3 : Pre-injury (T> 2.58)

Maximum 01	T = 4.12	X / Y / Z =	-48	-72	8	L Middle Temporal Gyrus	-> Assigned to	left	Area hOc5 [V5/MT]
Maximum 02	T = 3.07	X / Y / Z =	-52	-74	-2	L Inferior Occipital Gyrus	-> Assigned to	left	Area hOc4la

Cluster 3 (268 vox): T3 : Pre-injury (T> 2.58)

Maximum 01	T = 3.92	X / Y / Z =	-4	20	56	L Posterior-Medial Frontal
Maximum 02	T = 3.44	X / Y / Z =	-4	6	66	L Posterior-Medial Frontal

Maximum 03	T = 3.24	X / Y / Z =	-2	10	62	L Posterior-Medial Frontal			

Cluster 4 (165 vox): T3 : Pre-injury (T> 2.58)

Maximum 01	T = 4.65	X / Y / Z =	-26	48	-8	L Middle Orbital Gyrus			
Maximum 02	T = 2.92	X / Y / Z =	-26	46	0	L Superior Orbital Gyrus			

Recognition of the Post-injury face at T3

Cluster 1 (9663 vox): T3: Post-injury (T> 2.58)

Maximum 01	T = 8.85	X / Y / Z =	-14	-94	24	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 02	T = 8.60	X / Y / Z =	32	-60	58	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 03	T = 8.37	X / Y / Z =	-40	-92	6	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 04	T = 8.33	X / Y / Z =	-42	-90	4	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 05	T = 8.32	X / Y / Z =	36	-68	24	N/A			
Maximum 06	T = 8.26	X / Y / Z =	-8	-98	16	L Calcarine Gyrus	-> Assigned to	left	Area hOc2 [V2]
Maximum 07	T = 8.19	X / Y / Z =	36	-70	28	N/A			
Maximum 08	T = 8.12	X / Y / Z =	38	-90	4	R Inferior Occipital Gyrus	-> Assigned to	right	Area hOc4lp
Maximum 09	T = 8.10	X / Y / Z =	36	-78	34	R Middle Occipital Gyrus			
Maximum 10	T = 7.64	X / Y / Z =	14	-66	60	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)
Maximum 11	T = 7.49	X / Y / Z =	38	-82	16	R Middle Occipital Gyrus			

Cluster 2 (537 vox): T3: Post-injury (T> 2.58)

Maximum 01	T = 5.56	X / Y / Z =	48	42	16	R Middle Frontal Gyrus			
Maximum 02	T = 4.92	X / Y / Z =	42	56	8	R Middle Frontal Gyrus			
Maximum 03	T = 3.93	X / Y / Z =	42	42	30	R Middle Frontal Gyrus			
Maximum 04	T = 3.62	X / Y / Z =	38	44	12	R Middle Frontal Gyrus			

Cluster 3 (216 vox): T3: Post-injury (T> 2.58)

Maximum 01	T = 5.96	X / Y / Z =	-42	-40	54	L Postcentral Gyrus	-> Assigned to	left	Area 2
Maximum 02	T = 2.75	X / Y / Z =	-38	-50	58	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP3 (IPS)

Recognition of the Post-transplant face at T3

Cluster 1 (1916 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 7.66	X / Y / Z =	28	34	48	R Middle Frontal Gyrus			
Maximum 02	T = 6.00	X / Y / Z =	0	62	28	L Superior Medial Gyrus			
Maximum 03	T = 4.77	X / Y / Z =	2	50	26	L Superior Medial Gyrus			
Maximum 04	T = 4.66	X / Y / Z =	42	36	34	R Middle Frontal Gyrus			
Maximum 05	T = 4.45	X / Y / Z =	4	40	52	R Superior Medial Gyrus			
Maximum 06	T = 4.29	X / Y / Z =	18	54	30	R Superior Frontal Gyrus			
Maximum 07	T = 4.23	X / Y / Z =	50	18	24	R IFG (p. Triangularis)			
Maximum 08	T = 4.09	X / Y / Z =	-2	56	38	L Superior Medial Gyrus			
Maximum 09	T = 3.57	X / Y / Z =	42	26	26	R Middle Frontal Gyrus			
Maximum 10	T = 3.24	X / Y / Z =	2	72	14	N/A			
Maximum 11	T = 3.17	X / Y / Z =	30	30	18	N/A			

Cluster 2 (1315 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 7.21	X / Y / Z =	32	-62	58	R Angular Gyrus	-> Assigned to	right	Area hIP3 (IPS)
Maximum 02	T = 7.01	X / Y / Z =	52	-34	56	R Inferior Parietal Lobule	-> Assigned to	right	Area 1
Maximum 03	T = 5.48	X / Y / Z =	16	-68	58	R Superior Parietal Lobule			
Maximum 04	T = 4.51	X / Y / Z =	46	-48	54	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP2 (IPS)
Maximum 05	T = 3.67	X / Y / Z =	34	-40	48	R SupraMarginal Gyrus	-> Assigned to	right	Area 2
Maximum 06	T = 3.21	X / Y / Z =	32	-56	38	N/A			
Maximum 07	T = 3.15	X / Y / Z =	38	-36	42	N/A	-> Assigned to	right	Area 2
Maximum 08	T = 3.07	X / Y / Z =	6	-54	64	R Precuneus	-> Assigned to	right	Area 5M (SPL)

Cluster 3 (786 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 5.18	X / Y / Z =	-12	-94	10	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 4.88	X / Y / Z =	-16	-94	24	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 03	T = 4.81	X / Y / Z =	-10	-96	14	L Superior Occipital Gyrus			
Maximum 04	T = 4.64	X / Y / Z =	-30	-94	10	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 05	T = 4.42	X / Y / Z =	-12	-96	18	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 06	T = 3.73	X / Y / Z =	-40	-90	4	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 07	T = 3.71	X / Y / Z =	-38	-92	6	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 08	T = 3.64	X / Y / Z =	-18	-102	8	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc3d [V3d]
Maximum 09	T = 3.55	X / Y / Z =	2	-88	0	L Calcarine Gyrus	-> Assigned to	left	Area hOc1 [V1]

Cluster 4 (679 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 5.48	X / Y / Z =	-46	-44	56	L Inferior Parietal Lobule	-> Assigned to	left	Area 2
Maximum 02	T = 5.22	X / Y / Z =	-38	-54	60	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP3 (IPS)
Maximum 03	T = 3.95	X / Y / Z =	-42	-62	48	L Angular Gyrus	-> Assigned to	left	Area hIP1 (IPS)
Maximum 04	T = 3.86	X / Y / Z =	-54	-46	42	L Inferior Parietal Lobule	-> Assigned to	left	Area PF (IPL)
Maximum 05	T = 3.40	X / Y / Z =	-44	-56	42	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP1 (IPS)
Maximum 06	T = 2.84	X / Y / Z =	-48	-54	36	L SupraMarginal Gyrus			
Maximum 07	T = 2.81	X / Y / Z =	-46	-56	30	L Angular Gyrus	-> Assigned to	left	Area PFm (IPL)

Cluster 5 (223 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 4.36	X / Y / Z =	48	42	14	R Middle Frontal Gyrus
Maximum 02	T = 3.79	X / Y / Z =	42	46	10	R Middle Frontal Gyrus
Maximum 03	T = 3.13	X / Y / Z =	42	50	0	R Middle Orbital Gyrus

Cluster 6 (165 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 5.20	X / Y / Z =	56	-58	40	R Angular Gyrus	-> Assigned to	right	Area PFm (IPL)

Cluster 7 (139 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 4.61	X / Y / Z =	-44	22	38	L Middle Frontal Gyrus

Cluster 8 (129 vox): T3 : Post-transplant (T> 2.58)

Maximum 01	T = 3.55	X / Y / Z =	18	4	18	R Caudate Nucleus
Maximum 02	T = 3.11	X / Y / Z =	16	16	8	R Caudate Nucleus
Maximum 03	T = 2.98	X / Y / Z =	18	14	12	R Caudate Nucleus
Maximum 04	T = 2.84	X / Y / Z =	10	14	8	R Caudate Nucleus

Recognition of the Pre-injury face at T4

Cluster 1 (4713 vox): T4: Pre-injury (T> 2.58)

Maximum 01	T = 5.30	X / Y / Z =	32	60	-2	R Superior Orbital Gyrus	-> Assigned to	right	Area Fp1
Maximum 02	T = 5.29	X / Y / Z =	40	12	38	R IFG (p. Opercularis)			
Maximum 03	T = 5.08	X / Y / Z =	28	24	58	R Superior Frontal Gyrus			
Maximum 04	T = 5.04	X / Y / Z =	38	26	-6	R IFG (p. Orbitalis)			
Maximum 05	T = 4.92	X / Y / Z =	34	28	-4	R IFG (p. Orbitalis)			
Maximum 06	T = 4.59	X / Y / Z =	18	48	48	R Superior Frontal Gyrus			

Maximum 07	T = 4.56	X / Y / Z =	6	62	0	R Mid Orbital Gyrus	-> Assigned to	right	Area Fp1
Maximum 08	T = 4.39	X / Y / Z =	16	40	54	R Superior Frontal Gyrus			
Maximum 09	T = 4.38	X / Y / Z =	22	72	10	N/A			
Maximum 10	T = 4.37	X / Y / Z =	42	24	34	R IFG (p. Triangularis)			
Maximum 11	T = 4.36	X / Y / Z =	0	66	24	L Superior Medial Gyrus			

Cluster 2 (2738 vox): T4 : Pre-injury (T> 2.58)

Maximum 01	T = 4.85	X / Y / Z =	56	-64	38	R Angular Gyrus	-> Assigned to	right	Area PGa (IPL)
Maximum 02	T = 4.59	X / Y / Z =	56	-52	28	R Superior Temporal Gyrus	-> Assigned to	right	Area PFm (IPL)
Maximum 03	T = 4.47	X / Y / Z =	46	-72	40	R Angular Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 04	T = 4.33	X / Y / Z =	52	-52	6	R Middle Temporal Gyrus			
Maximum 05	T = 4.30	X / Y / Z =	46	-56	50	R Inferior Parietal Lobule	-> Assigned to	right	Area PGa (IPL)
Maximum 06	T = 4.24	X / Y / Z =	40	-66	54	R Angular Gyrus			
Maximum 07	T = 4.21	X / Y / Z =	36	-68	56	R Angular Gyrus	-> Assigned to	right	Area hIP3 (IPS)
Maximum 08	T = 4.12	X / Y / Z =	52	-52	36	R Angular Gyrus	-> Assigned to	right	Area PFm (IPL)
Maximum 09	T = 4.10	X / Y / Z =	38	-68	42	R Angular Gyrus			
Maximum 10	T = 4.07	X / Y / Z =	44	-64	54	R Angular Gyrus	-> Assigned to	right	Area PGa (IPL)
Maximum 11	T = 4.02	X / Y / Z =	36	-70	46	R Angular Gyrus			

Cluster 3 (544 vox): T4: Pre-injury (T> 2.58)

Maximum 01	T = 6.54	X / Y / Z =	2	-34	38	R MCC
Maximum 02	T = 4.19	X / Y / Z =	12	-40	26	N/A
Maximum 03	T = 3.95	X / Y / Z =	12	-46	34	R PCC
Maximum 04	T = 2.84	X / Y / Z =	0	-44	26	N/A

Cluster 4 (249 vox): T4: Pre-injury (T> 2.58)

Maximum 01	T = 3.78	X / Y / Z =	-14	-58	20	L Precuneus
Maximum 02	T = 3.71	X / Y / Z =	-14	-62	24	L Cuneus
Maximum 03	T = 3.09	X / Y / Z =	-14	-70	26	L Cuneus
Maximum 04	T = 3.04	X / Y / Z =	-6	-62	14	L Precuneus

Cluster 5 (212 vox): T4: Pre-injury (T> 2.58)

Maximum 01	T = 4.03	X / Y / Z =	8	-52	6	R Cerebelum (IV-V)
Maximum 02	T = 3.79	X / Y / Z =	14	-60	18	R Calcarine Gyrus
Maximum 03	T = 3.35	X / Y / Z =	14	-58	12	R Lingual Gyrus

Maximum 04	T = 2.72	X / Y / Z =	20	-56	24	R Precuneus			

Cluster 6 (194 vox): T4: Pre-injury (T> 2.58)

Maximum 01	T = 3.63	X / Y / Z =	-40	54	-6	L Middle Orbital Gyrus			
Maximum 02	T = 3.41	X / Y / Z =	-42	60	0	N/A			
Maximum 03	T = 3.01	X / Y / Z =	-26	62	0	N/A	-> Assigned to	left	Area Fp1
Maximum 04	T = 2.97	X / Y / Z =	-32	60	2	N/A			

Recognition of the Post-injury face at T4

Cluster 1 (769 vox): T4 : Post-injury (T> 2.58)

Maximum 01	T = 4.91	X / Y / Z =	30	-48	44	N/A			
Maximum 02	T = 4.79	X / Y / Z =	30	-54	70	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 03	T = 4.78	X / Y / Z =	38	-54	64	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 04	T = 3.92	X / Y / Z =	38	-50	56	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 05	T = 3.19	X / Y / Z =	46	-40	62	R Inferior Parietal Lobule	-> Assigned to	right	Area 1

Cluster 2 (734 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 5.54	X / Y / Z =	22	-72	58	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)
Maximum 02	T = 5.39	X / Y / Z =	30	-70	56	R Superior Parietal Lobule			
Maximum 03	T = 4.59	X / Y / Z =	44	-86	14	R Middle Occipital Gyrus	-> Assigned to	right	Area hOc4la
Maximum 04	T = 3.48	X / Y / Z =	36	-78	6	N/A			
Maximum 05	T = 3.16	X / Y / Z =	34	-74	28	R Middle Occipital Gyrus			
Maximum 06	T = 3.11	X / Y / Z =	28	-64	36	N/A			
Maximum 07	T = 2.87	X / Y / Z =	26	-64	42	N/A			
Maximum 08	T = 2.80	X / Y / Z =	30	-68	32	N/A			

Cluster 3 (571 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 4.62	X / Y / Z =	-30	-92	28	L Middle Occipital Gyrus			
Maximum 02	T = 4.34	X / Y / Z =	-38	-90	20	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 03	T = 4.23	X / Y / Z =	-38	-92	16	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 04	T = 4.19	X / Y / Z =	-24	-82	46	L Superior Occipital Gyrus			
Maximum 05	T = 3.82	X / Y / Z =	-34	-88	10	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4lp
Maximum 06	T = 3.81	X / Y / Z =	-34	-84	8	L Middle Occipital Gyrus			
Maximum 07	T = 2.96	X / Y / Z =	-14	-82	48	L Superior Occipital Gyrus			

Cluster 4 (439 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 5.01	X / Y / Z =	54	14	32	R IFG (p. Opercularis)	-> Assigned to	right	Area 45

Cluster 5 (375 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 4.47	X / Y / Z =	44	46	18	R Middle Frontal Gyrus			
Maximum 02	T = 4.04	X / Y / Z =	46	42	26	R Middle Frontal Gyrus			
Maximum 03	T = 3.00	X / Y / Z =	46	34	18	R IFG (p. Triangularis)			

Cluster 6 (278 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 3.87	X / Y / Z =	60	-12	-4	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 02	T = 3.43	X / Y / Z =	64	-10	4	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 03	T = 3.27	X / Y / Z =	66	-18	12	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 04	T = 2.77	X / Y / Z =	58	-4	8	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 1.2

Cluster 7 (248 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 5.26	X / Y / Z =	46	48	-8	R Middle Orbital Gyrus			

Cluster 8 (163 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 3.82	X / Y / Z =	-26	-56	54	L Superior Parietal Lobule			
Maximum 02	T = 3.44	X / Y / Z =	-20	-68	62	L Superior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 03	T = 3.04	X / Y / Z =	-26	-66	62	L Superior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 04	T = 2.78	X / Y / Z =	-28	-64	60	L Superior Parietal Lobule			

Cluster 9 (152 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 3.55	X / Y / Z =	-54	-76	4	L Middle Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 02	T = 3.47	X / Y / Z =	-46	-70	0	L Inferior Temporal Gyrus			
Maximum 03	T = 3.26	X / Y / Z =	-50	-72	2	L Inferior Occipital Gyrus	-> Assigned to	left	Area hOc4la
Maximum 04	T = 2.68	X / Y / Z =	-54	-74	12	L Middle Temporal Gyrus	-> Assigned to	left	Area hOc4la

Cluster 10 (145 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 5.09	X / Y / Z =	46	0	-14	R Temporal Pole			
Maximum 02	T = 2.62	X / Y / Z =	50	-10	-18	R Middle Temporal Gyrus			

Cluster 11 (118 vox): T4: Post-injury (T> 2.58)

Maximum 01	T = 3.33	X / Y / Z =	54	20	6	R IFG (p. Triangularis)	-> Assigned to	right	Area 45
Maximum 02	T = 2.72	X / Y / Z =	48	22	-8	R IFG (p. Orbitalis)			
Maximum 03	T = 2.72	X / Y / Z =	46	18	-2	R IFG (p. Orbitalis)			
Maximum 04	T = 2.67	X / Y / Z =	46	26	-10	R IFG (p. Orbitalis)			

Recognition of the Post-transplant face at T4

Cluster 1 (445 vox): T4 post (T> 2.58)

Maximum 01	T = 4.60	X / Y / Z =	32	-80	8	N/A			
Maximum 02	T = 3.45	X / Y / Z =	32	-78	22	R Middle Occipital Gyrus			
Maximum 03	T = 3.38	X / Y / Z =	32	-74	20	N/A			
Maximum 04	T = 3.29	X / Y / Z =	38	-86	20	R Middle Occipital Gyrus			

Cluster 2 (379 vox): T4 post (T> 2.58)

Maximum 01	T = 3.71	X / Y / Z =	-4	-74	10	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 3.47	X / Y / Z =	8	-68	12	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 03	T = 3.47	X / Y / Z =	14	-56	12	R Lingual Gyrus			
Maximum 04	T = 3.44	X / Y / Z =	0	-74	14	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 05	T = 3.41	X / Y / Z =	2	-72	12	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 06	T = 3.11	X / Y / Z =	20	-60	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]

Cluster 3 (366 vox): T4 post (T> 2.58)

Maximum 01	T = 5.13	X / Y / Z =	44	6	26	N/A
Maximum 02	T = 5.12	X / Y / Z =	48	8	28	R IFG (p. Opercularis)

Cluster 4 (171 vox): T4 post (T> 2.58)

Maximum 01	T = 3.99	X / Y / Z =	0	-28	36	R MCC

Cluster 5 (153 vox): T4 post (T> 2.58)

Maximum 01	T = 3.65	X / Y / Z =	28	-64	46	R Angular Gyrus
Maximum 02	T = 3.52	X / Y / Z =	26	-62	38	N/A

Cluster 6 (147 vox): T4 post (T> 2.58)

Maximum 01	T = 4.44	X / Y / Z =	28	-48	42	N/A			
Maximum 02	T = 2.93	X / Y / Z =	40	-40	42	N/A	-> Assigned to	right	Area hIP2 (IPS)

Maximum 03	T = 2.81	X / Y / Z =	36	-40	40	N/A			

Cluster 7 (133 vox): T4 post (T> 2.58)

Maximum 01	T = 4.37	X / Y / Z =	36	18	4	R Insula Lobe
Maximum 02	T = 2.89	X / Y / Z =	32	26	0	R IFG (p. Orbitalis)

Recognition of the Pre-injury face at T5

Cluster 1 (12312 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 6.90	X / Y / Z =	-30	10	62	L Middle Frontal Gyrus			
Maximum 02	T = 6.38	X / Y / Z =	-54	-70	18	L Middle Temporal Gyrus			
Maximum 03	T = 5.52	X / Y / Z =	-4	-42	54	L MCC	-> Assigned to	left	Area 5M (SPL)
Maximum 04	T = 5.32	X / Y / Z =	-6	-62	68	L Precuneus			
Maximum 05	T = 5.23	X / Y / Z =	-2	-60	68	L Precuneus	-> Assigned to	left	Area 7A (SPL)
Maximum 06	T = 5.16	X / Y / Z =	4	-54	40	R MCC			
Maximum 07	T = 5.13	X / Y / Z =	-22	10	70	L Superior Frontal Gyrus			
Maximum 08	T = 5.06	X / Y / Z =	-46	12	52	L Middle Frontal Gyrus			
Maximum 09	T = 5.00	X / Y / Z =	-4	-60	52	L Precuneus			
Maximum 10	T = 4.90	X / Y / Z =	-22	-8	78	L Superior Frontal Gyrus			
Maximum 11	T = 4.84	X / Y / Z =	-34	-82	38	L Middle Occipital Gyrus			

Cluster 2 (1511 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 4.61	X / Y / Z =	32	-86	26	R Middle Occipital Gyrus			
Maximum 02	T = 4.55	X / Y / Z =	14	-68	62	R Superior Parietal Lobule	-> Assigned to	right	Area 7A (SPL)
Maximum 03	T = 4.35	X / Y / Z =	12	-94	30	R Cuneus	-> Assigned to	right	Area hOc3d [V3d]
Maximum 04	T = 4.25	X / Y / Z =	34	-82	2	N/A			
Maximum 05	T = 3.42	X / Y / Z =	30	-68	32	N/A			
Maximum 06	T = 3.40	X / Y / Z =	28	-70	56	R Superior Parietal Lobule			
Maximum 07	T = 3.30	X / Y / Z =	28	-68	48	R Superior Occipital Gyrus			
Maximum 08	T = 3.21	X / Y / Z =	24	-68	46	R Superior Occipital Gyrus			
Maximum 09	T = 3.08	X / Y / Z =	50	-60	22	R Middle Temporal Gyrus			
Maximum 10	T = 3.08	X / Y / Z =	56	-70	26	R Middle Temporal Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 11	T = 3.06	X / Y / Z =	28	-74	48	R Superior Occipital Gyrus			

Cluster 3 (432 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 4.04	X / Y / Z =	6	66	36	N/A

Maximum 02	T = 4.03	X / Y / Z =	-12	70	6	N/A			
Maximum 03	T = 3.75	X / Y / Z =	-4	62	20	L Superior Medial Gyrus	-> Assigned to	left	Area Fp1
Maximum 04	T = 3.58	X / Y / Z =	10	68	32	N/A			
Maximum 05	T = 3.38	X / Y / Z =	-4	70	20	N/A			
Maximum 06	T = 3.33	X / Y / Z =	8	60	32	R Superior Medial Gyrus			
Maximum 07	T = 3.30	X / Y / Z =	-8	72	18	N/A			
Maximum 08	T = 2.76	X / Y / Z =	-22	68	4	N/A			

Cluster 4 (425 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 4.45	X / Y / Z =	34	4	64	R Middle Frontal Gyrus
Maximum 02	T = 3.88	X / Y / Z =	46	6	52	R Middle Frontal Gyrus
Maximum 03	T = 3.29	X / Y / Z =	32	4	52	R Middle Frontal Gyrus

Cluster 5 (398 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 4.88	X / Y / Z =	6	-12	74	R Posterior-Medial Frontal
Maximum 02	T = 3.65	X / Y / Z =	0	-18	60	L Posterior-Medial Frontal
Maximum 03	T = 3.09	X / Y / Z =	0	-2	52	L Posterior-Medial Frontal
Maximum 04	T = 2.97	X / Y / Z =	2	0	58	R Posterior-Medial Frontal
Maximum 05	T = 2.94	X / Y / Z =	2	-6	66	R Posterior-Medial Frontal
Maximum 06	T = 2.92	X / Y / Z =	2	6	58	R Posterior-Medial Frontal
Maximum 07	T = 2.90	X / Y / Z =	4	4	60	R Posterior-Medial Frontal
Maximum 08	T = 2.59	X / Y / Z =	-2	-22	52	L MCC

Cluster 6 (326 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 3.66	X / Y / Z =	-50	-36	18	L Superior Temporal Gyrus	-> Assigned to	left	Area PFcm (IPL)
Maximum 02	T = 3.38	X / Y / Z =	-62	-30	4	L Middle Temporal Gyrus	-> Assigned to	left	Area TE 3
Maximum 03	T = 3.37	X / Y / Z =	-62	-34	8	L Middle Temporal Gyrus			
Maximum 04	T = 3.05	X / Y / Z =	-66	-26	12	L Superior Temporal Gyrus	-> Assigned to	left	Area TE 3
Maximum 05	T = 2.90	X / Y / Z =	-64	-10	6	L Superior Temporal Gyrus	-> Assigned to	left	Area TE 3
Maximum 06	T = 2.90	X / Y / Z =	-68	-38	-2	L Middle Temporal Gyrus			

Cluster 7 (242 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 3.49	X / Y / Z =	54	-26	50	R Postcentral Gyrus	-> Assigned to	right	Area 2
Maximum 02	T = 3.07	X / Y / Z =	36	-32	56	R Postcentral Gyrus	-> Assigned to	right	Area 4p
Maximum 03	T = 3.01	X / Y / Z =	48	-30	62	R Postcentral Gyrus	-> Assigned to	right	Area 1

Cluster 8 (163 vox): T5 : Pre-injury (T> 2.58)

Maximum 01	T = 3.66	X / Y / Z =	70	-26	8	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 02	T = 3.45	X / Y / Z =	64	-12	6	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3

Recognition of the Post-injury face at T5

No significant activations

Recognition of the Post-transplant face at T5

Cluster 1 (961 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 7.79	X / Y / Z =	2	60	42	N/A			
Maximum 02	T = 6.24	X / Y / Z =	0	50	50	L Superior Medial Gyrus			
Maximum 03	T = 5.05	X / Y / Z =	4	38	58	R Superior Medial Gyrus			
Maximum 04	T = 4.59	X / Y / Z =	-2	72	12	N/A			
Maximum 05	T = 4.53	X / Y / Z =	2	72	16	N/A			
Maximum 06	T = 4.32	X / Y / Z =	0	70	18	N/A			
Maximum 07	T = 3.96	X / Y / Z =	-2	68	2	N/A			
Maximum 08	T = 3.95	X / Y / Z =	4	72	20	N/A			
Maximum 09	T = 3.58	X / Y / Z =	12	68	32	N/A			
Maximum 10	T = 3.49	X / Y / Z =	-2	58	-2	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2
Maximum 11	T = 3.37	X / Y / Z =	6	70	28	N/A			

Cluster 2 (587 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 5.32	X / Y / Z =	38	32	50	R Middle Frontal Gyrus
Maximum 02	T = 5.08	X / Y / Z =	32	24	58	N/A
Maximum 03	T = 3.45	X / Y / Z =	24	22	48	R Middle Frontal Gyrus
Maximum 04	T = 3.40	X / Y / Z =	24	18	50	R Superior Frontal Gyrus
Maximum 05	T = 3.27	X / Y / Z =	24	12	66	R Superior Frontal Gyrus
Maximum 06	T = 2.99	X / Y / Z =	22	50	44	R Superior Frontal Gyrus
Maximum 07	T = 2.85	X / Y / Z =	20	52	42	R Superior Frontal Gyrus

Cluster 3 (568 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 4.74	X / Y / Z =	32	-68	50	R Angular Gyrus			
Maximum 02	T = 4.55	X / Y / Z =	30	-66	46	R Angular Gyrus			
Maximum 03	T = 4.23	X / Y / Z =	20	-76	52	R Precuneus			
Maximum 04	T = 3.90	X / Y / Z =	16	-74	56	R Superior Parietal Lobule	-> Assigned to	right	Area 7P (SPL)

Cluster 4 (523 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 5.42	X / Y / Z =	-28	66	4	N/A
Maximum 02	T = 4.23	X / Y / Z =	-36	58	2	N/A
Maximum 03	T = 3.80	X / Y / Z =	-26	66	18	N/A
Maximum 04	T = 3.80	X / Y / Z =	-28	64	20	N/A

Cluster 5 (433 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 4.80	X / Y / Z =	48	36	22	R Middle Frontal Gyrus
Maximum 02	T = 4.40	X / Y / Z =	46	48	18	R Middle Frontal Gyrus

Cluster 6 (275 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 5.21	X / Y / Z =	34	68	2	N/A
Maximum 02	T = 4.60	X / Y / Z =	40	64	0	N/A
Maximum 03	T = 3.31	X / Y / Z =	32	68	16	N/A

Cluster 7 (157 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 4.20	X / Y / Z =	36	-86	26	R Middle Occipital Gyrus			
Maximum 02	T = 2.91	X / Y / Z =	24	-92	30	R Superior Occipital Gyrus	-> Assigned to	right	Area hOc4d [V3A]
Maximum 03	T = 2.86	X / Y / Z =	32	-90	16	R Middle Occipital Gyrus	-> Assigned to	right	Area hOc4lp
Maximum 04	T = 2.59	X / Y / Z =	28	-84	12	N/A			

Cluster 8 (153 vox): T5 :Post-transplant (T> 2.58)

Maximum 01	T = 3.97	X / Y / Z =	-42	42	18	L IFG (p. Triangularis)

Table S4: Increased and decreased activity for through time

Pre-injury face: Increased activation through time

Cluster 1 (20969 vox): Pre-injury face: Increased activation through time (T> 2.58)

Maximum 01	T = 8.18	X / Y / Z =	-48	14	50	L Middle Frontal Gyrus			
Maximum 02	T = 7.53	X / Y / Z =	-38	4	40	L Middle Frontal Gyrus			
Maximum 03	T = 6.68	X / Y / Z =	-52	-62	28	L Middle Temporal Gyrus	-> Assigned to	left	Area PGa (IPL)
Maximum 04	T = 6.65	X / Y / Z =	-34	-60	52	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP3 (IPS)
Maximum 05	T = 6.58	X / Y / Z =	-44	-56	52	L Inferior Parietal Lobule			
Maximum 06	T = 6.23	X / Y / Z =	-68	-40	-4	L Middle Temporal Gyrus			
Maximum 07	T = 6.18	X / Y / Z =	-38	8	62	L Middle Frontal Gyrus			
Maximum 08	T = 6.17	X / Y / Z =	-2	20	52	L Posterior-Medial Frontal			
Maximum 09	T = 5.93	X / Y / Z =	40	18	34	R IFG (p. Triangularis)			
Maximum 10	T = 5.83	X / Y / Z =	36	20	32	R IFG (p. Triangularis)			
Maximum 11	T = 5.75	X / Y / Z =	-2	44	42	L Superior Medial Gyrus			

Cluster 2 (4113 vox): Pre-injury face: Increased activation through time (T> 2.58)

Maximum 01	T = 5.91	X / Y / Z =	60	-60	18	R Middle Temporal Gyrus	-> Assigned to	right	Area PGa (IPL)
Maximum 02	T = 5.86	X / Y / Z =	44	-56	52	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP1 (IPS)
Maximum 03	T = 5.63	X / Y / Z =	56	-52	20	R Superior Temporal Gyrus			
Maximum 04	T = 5.26	X / Y / Z =	50	-48	42	R SupraMarginal Gyrus	-> Assigned to	right	Area hIP1 (IPS)
Maximum 05	T = 5.26	X / Y / Z =	52	-64	38	R Angular Gyrus	-> Assigned to	right	Area PGa (IPL)
Maximum 06	T = 5.18	X / Y / Z =	52	-60	16	R Middle Temporal Gyrus			
Maximum 07	T = 4.52	X / Y / Z =	68	-22	0	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 08	T = 4.31	X / Y / Z =	66	-14	10	R Superior Temporal Gyrus	-> Assigned to	right	Area TE 3
Maximum 09	T = 4.23	X / Y / Z =	58	-34	2	R Middle Temporal Gyrus			
Maximum 10	T = 4.21	X / Y / Z =	62	-32	4	R Middle Temporal Gyrus			
Maximum 11	T = 4.06	X / Y / Z =	64	-28	10	R Superior Temporal Gyrus			

Cluster 3 (215 vox): Pre-injury face: Increased activation through time (T> 2.58)

Maximum 01	T = 3.77	X / Y / Z =	52	24	-10	R IFG (p. Orbitalis)
Maximum 02	T = 3.62	X / Y / Z =	50	28	-10	R IFG (p. Orbitalis)
Maximum 03	T = 3.55	X / Y / Z =	38	24	-6	R IFG (p. Orbitalis)
Maximum 04	T = 3.55	X / Y / Z =	50	38	-8	R IFG (p. Orbitalis)

Post-injury face: Increased activation through time

No significant activations

Post-transplant face: T4>T3

Cluster 1 (2465 vox): Post-transplant face: T4>T3 (T> 2.58)

Maximum 01	T = 5.58	X / Y / Z =	-48	-22	54	L Postcentral Gyrus	-> Assigned to	left	Area 3b
Maximum 02	T = 5.51	X / Y / Z =	-32	-36	62	L Postcentral Gyrus	-> Assigned to	left	Area 4p
Maximum 03	T = 5.51	X / Y / Z =	-28	-28	72	L Precentral Gyrus			
Maximum 04	T = 5.35	X / Y / Z =	-16	-36	74	L Paracentral Lobule	-> Assigned to	left	Area 4a
Maximum 05	T = 5.31	X / Y / Z =	-12	-34	74	L Paracentral Lobule			
Maximum 06	T = 5.29	X / Y / Z =	-20	-40	74	L Postcentral Gyrus			
Maximum 07	T = 5.05	X / Y / Z =	-36	-26	70	L Precentral Gyrus			
Maximum 08	T = 4.53	X / Y / Z =	-38	-18	58	L Precentral Gyrus			
Maximum 09	T = 4.23	X / Y / Z =	-20	-16	76	L Precentral Gyrus			
Maximum 10	T = 4.08	X / Y / Z =	-28	-2	68	L Middle Frontal Gyrus			
Maximum 11	T = 3.98	X / Y / Z =	-54	-20	44	L Postcentral Gyrus	-> Assigned to	left	Area 3b

Cluster 2 (1858 vox): Post-transplant face: T4>T3 (T> 2.58)

Maximum 01	T = 5.03	X / Y / Z =	18	-38	72	R Postcentral Gyrus	-> Assigned to	right	Area 4a
Maximum 02	T = 4.96	X / Y / Z =	48	-20	58	RPrecentral Gyrus			
Maximum 03	T = 4.60	X / Y / Z =	46	-6	54	RPrecentral Gyrus			
Maximum 04	T = 4.54	X / Y / Z =	36	-36	62	R Postcentral Gyrus	-> Assigned to	right	Area 4a
Maximum 05	T = 4.35	X / Y / Z =	52	-12	54	RPrecentral Gyrus			
Maximum 06	T = 4.35	X / Y / Z =	28	-10	70	R Superior Frontal Gyrus			
Maximum 07	T = 3.97	X / Y / Z =	32	-26	66	RPrecentral Gyrus			
Maximum 08	T = 3.78	X / Y / Z =	40	-8	44	RPrecentral Gyrus			
Maximum 09	T = 3.35	X / Y / Z =	32	-4	54	RPrecentral Gyrus			
Maximum 10	T = 3.31	X / Y / Z =	30	-6	52	N/A			
Maximum 11	T = 3.26	X / Y / Z =	34	-18	68	RPrecentral Gyrus			

Cluster 3 (242 vox): Post-transplant face: T4>T3 (T> 2.58)

Maximum 01	T = 3.31	X / Y / Z =	-4	-72	10	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 3.28	X / Y / Z =	4	-68	12	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 03	T = 3.24	X / Y / Z =	0	-74	8	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 04	T = 3.16	X / Y / Z =	12	-58	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 05	T = 3.09	X / Y / Z =	14	-58	12	R Lingual Gyrus			
Maximum 06	T = 2.83	X / Y / Z =	12	-64	6	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]

Cluster 4 (152 vox): Post-transplant face: T4>T3 (T> 2.58)

Maximum 01	T = 4.33	X / Y / Z =	46	8	30	R IFG (p. Triangularis)

Cluster 5 (148 vox): Post-transplant face: T4>T3 (T> 2.58)

Maximum 01	T = 3.69	X / Y / Z =	26	-64	42	N/A
Maximum 02	T = 3.68	X / Y / Z =	28	-68	48	R Superior Occipital Gyrus

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Post-transplant face: T5>T4

Cluster 1 (811 vox): Post-transplant face: T5>T4 (T> 2.58)

Maximum 01	T = 5.51	X / Y / Z =	-6	-16	78	L Posterior-Medial Frontal			
Maximum 02	T = 4.57	X / Y / Z =	16	-20	78	R Superior Frontal Gyrus			
Maximum 03	T = 3.94	X / Y / Z =	8	-40	76	R Paracentral Lobule	-> Assigned to	right	Area 4a
Maximum 04	T = 3.52	X / Y / Z =	-4	-20	68	L Posterior-Medial Frontal			
Maximum 05	T = 3.40	X / Y / Z =	8	-12	74	R Posterior-Medial Frontal			
Maximum 06	T = 3.33	X / Y / Z =	0	-18	68	L Posterior-Medial Frontal			
Maximum 07	T = 3.26	X / Y / Z =	4	-20	68	R Posterior-Medial Frontal			
Maximum 08	T = 3.25	X / Y / Z =	6	-22	70	R Posterior-Medial Frontal			

Cluster 2 (528 vox): Post-transplant face: T5>T4 (T> 2.58)

Maximum 01	T = 4.02	X / Y / Z =	-66	-34	8	L Middle Temporal Gyrus	-> Assigned to	left	Area TE 3
Maximum 02	T = 3.41	X / Y / Z =	-64	-52	2	L Middle Temporal Gyrus			
Maximum 03	T = 3.40	X / Y / Z =	-58	-62	10	L Middle Temporal Gyrus			
Maximum 04	T = 3.37	X / Y / Z =	-66	-44	8	L Middle Temporal Gyrus			
Maximum 05	T = 3.24	X / Y / Z =	-60	-44	6	L Middle Temporal Gyrus			
Maximum 06	T = 3.24	X / Y / Z =	-46	-52	6	N/A			

Maximum 07	T = 3.14	X / Y / Z =	-60	-68	8	N/A			
Maximum 08	T = 3.10	X / Y / Z =	-56	-48	8	L Middle Temporal Gyrus			
Maximum 09	T = 2.90	X / Y / Z =	-54	-34	8	L Middle Temporal Gyrus			
Maximum 10	T = 2.84	X / Y / Z =	-46	-56	16	L Middle Temporal Gyrus			
Maximum 11	T = 2.78	X / Y / Z =	-34	-60	20	N/A			

Cluster 3 (490 vox): Post-transplant face: T5>T4 (T> 2.58)

Maximum 01	T = 4.23	X / Y / Z =	-58	-4	24	L Postcentral Gyrus	-> Assigned to	left	Area 44
Maximum 02	T = 4.05	X / Y / Z =	-50	-6	34	L Precentral Gyrus			
Maximum 03	T = 3.63	X / Y / Z =	-52	0	46	L Precentral Gyrus			
Maximum 04	T = 3.25	X / Y / Z =	-36	-16	24	L Insula Lobe	-> Assigned to	left	Area OP3 [VS]
Maximum 05	T = 3.23	X / Y / Z =	-32	-16	24	N/A			
Maximum 06	T = 2.95	X / Y / Z =	-40	-18	22	L Rolandic Operculum	-> Assigned to	left	Area OP3 [VS]

Cluster 4 (333 vox): Post-transplant face: T5>T4 (T> 2.58)

Maximum 01	T = 5.67	X / Y / Z =	0	50	50	L Superior Medial Gyrus
Maximum 02	T = 4.61	X / Y / Z =	2	60	40	N/A
Maximum 03	T = 4.57	X / Y / Z =	4	38	58	R Superior Medial Gyrus
Maximum 04	T = 2.88	X / Y / Z =	-8	58	36	L Superior Medial Gyrus

Cluster 5 (182 vox): Post-transplant face: T5>T4 (T> 2.58)

Maximum 01	T = 3.93	X / Y / Z =	54	-2	38	RPrecentral Gyrus

Cluster 6 (158 vox): Post-transplant face: T5>T4 (T> 2.58)

Maximum 01	T = 4.90	X / Y / Z =	58	-8	-10	R Middle Temporal Gyrus

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Post-transplant face: T5>T3

Cluster 1 (6315 vox): Post-transplant face: T5>T3 (T> 2.58)

Maximum 01	T = 7.20	X / Y / Z =	-16	-36	74	L Paracentral Lobule	-> Assigned to	left	Area 4a
Maximum 02	T = 7.06	X / Y / Z =	14	-36	74	RPrecentral Gyrus			
Maximum 03	T = 6.99	X / Y / Z =	18	-36	74	RPrecentral Gyrus	-> Assigned to	right	Area 4a
Maximum 04	T = 6.63	X / Y / Z =	12	-24	76	R Posterior-Medial Frontal			

Maximum 05	T = 5.63	X / Y / Z =	30	-10	70	R Superior Frontal Gyrus			
Maximum 06	T = 5.63	X / Y / Z =	-26	-26	70	L Precentral Gyrus			
Maximum 07	T = 5.62	X / Y / Z =	32	-26	66	RPrecentral Gyrus			
Maximum 08	T = 5.30	X / Y / Z =	-32	-36	62	L Postcentral Gyrus	-> Assigned to	left	Area 4p
Maximum 09	T = 5.24	X / Y / Z =	32	-36	64	R Postcentral Gyrus	-> Assigned to	right	Area 4a
Maximum 10	T = 5.19	X / Y / Z =	-8	-16	76	L Posterior-Medial Frontal			
Maximum 11	T = 5.14	X / Y / Z =	-18	-12	76	L Superior Frontal Gyrus			

Cluster 2 (290 vox): Post-transplant face: T5>T3 (T> 2.58)

Maximum 01	T = 4.31	X / Y / Z =	-60	-44	10	L Middle Temporal Gyrus			
Maximum 02	T = 3.49	X / Y / Z =	-66	-30	10	L Middle Temporal Gyrus	-> Assigned to	left	Area TE 3

Cluster 3 (217 vox): Post-transplant face: T5>T3 (T> 2.58)

Maximum 01	T = 3.72	X / Y / Z =	32	4	56	R Middle Frontal Gyrus
Maximum 02	T = 3.54	X / Y / Z =	26	10	62	R Middle Frontal Gyrus
Maximum 03	T = 3.51	X / Y / Z =	24	12	64	R Superior Frontal Gyrus

Cluster 4 (117 vox): Post-transplant face: T5>T3 (T> 2.58)

Maximum 01	T = 3.77	X / Y / Z =	6	8	70	R Posterior-Medial Frontal

Cluster 5 (116 vox): Post-transplant face: T5>T3 (T> 2.58)

Maximum 01	T = 3.50	X / Y / Z =	-10	72	14	N/A			
Maximum 02	T = 2.99	X / Y / Z =	0	58	4	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2
Maximum 03	T = 2.98	X / Y / Z =	-2	66	10	L Superior Medial Gyrus	-> Assigned to	left	Area Fp1
Maximum 04	T = 2.83	X / Y / Z =	0	50	4	L Mid Orbital Gyrus	-> Assigned to	left	Area Fp2

Pre-injury face: Decreased activation through time

No significant activations

Post-injury face: Decreased activation through time

Cluster 1 (19002 vox): Post-injury face: Decreased activation through time (T> 2.58)

Maximum 01	T = 7.55	X / Y / Z =	36	-80	6	N/A			
Maximum 02	T = 6.64	X / Y / Z =	-24	-54	54	L Superior Parietal Lobule			
Maximum 03	T = 6.58	X / Y / Z =	-34	-84	6	L Middle Occipital Gyrus			
Maximum 04	T = 6.36	X / Y / Z =	28	-68	50	R Angular Gyrus			
Maximum 05	T = 6.24	X / Y / Z =	-18	-72	56	L Superior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 06	T = 6.18	X / Y / Z =	22	-78	50	R Superior Occipital Gyrus			
Maximum 07	T = 6.09	X / Y / Z =	-26	-86	38	L Middle Occipital Gyrus			
Maximum 08	T = 6.05	X / Y / Z =	-28	-80	34	L Middle Occipital Gyrus			
Maximum 09	T = 5.97	X / Y / Z =	10	-62	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 10	T = 5.87	X / Y / Z =	30	-58	66	R Superior Parietal Lobule	-> Assigned to	right	Area 7PC (SPL)
Maximum 11	T = 5.86	X / Y / Z =	-20	-84	42	L Superior Occipital Gyrus			

Cluster 2 (219 vox): Post-injury face: Decreased activation through time T> 2.58)

Maximum 01	T = 3.87	X / Y / Z =	-42	-10	-4	L Superior Temporal Gyrus
Maximum 02	T = 3.65	X / Y / Z =	-40	-6	-6	L Superior Temporal Gyrus
Maximum 03	T = 2.92	X / Y / Z =	-44	-12	-16	N/A
Maximum 04	T = 2.84	X / Y / Z =	-42	-6	-18	N/A

Post-transplant face: T3>T4

Cluster 1 (1676 vox): Post-transplant face: T3>T4 (T> 2.58)

Maximum 01	T = 5.03	X / Y / Z =	10	-64	64	R Precuneus			
Maximum 02	T = 4.97	X / Y / Z =	52	-34	54	R SupraMarginal Gyrus	-> Assigned to	right	Area 1
Maximum 03	T = 4.93	X / Y / Z =	14	-66	58	R Superior Parietal Lobule			
Maximum 04	T = 4.75	X / Y / Z =	34	-60	58	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP3 (IPS)
Maximum 05	T = 4.65	X / Y / Z =	48	-72	32	R Middle Occipital Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 06	T = 4.60	X / Y / Z =	40	-66	34	R Angular Gyrus			
Maximum 07	T = 4.60	X / Y / Z =	40	-70	34	R Middle Occipital Gyrus			
Maximum 08	T = 4.49	X / Y / Z =	42	-74	34	R Middle Occipital Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 09	T = 4.39	X / Y / Z =	40	-78	36	R Middle Occipital Gyrus	-> Assigned to	right	Area PGp (IPL)
Maximum 10	T = 4.23	X / Y / Z =	-6	-62	62	L Precuneus			
Maximum 11	T = 4.10	X / Y / Z =	4	-52	64	R Precuneus	-> Assigned to	right	Area 5M (SPL)

Cluster 2 (547 vox): Post-transplant face: T3>T4 (T> 2.58)

Maximum 01	T = 5.61	X / Y / Z =	0	62	28	L Superior Medial Gyrus			
Maximum 02	T = 4.23	X / Y / Z =	-2	46	50	L Superior Medial Gyrus			
Maximum 03	T = 4.13	X / Y / Z =	2	50	28	R Superior Medial Gyrus			
Maximum 04	T = 4.09	X / Y / Z =	0	42	52	L Superior Medial Gyrus			
Maximum 05	T = 3.96	X / Y / Z =	-2	52	44	L Superior Medial Gyrus			

Cluster 3 (545 vox): Post-transplant face: T3>T4 (T> 2.58)

Maximum 01	T = 7.68	X / Y / Z =	28	34	50	R Middle Frontal Gyrus			
Maximum 02	T = 5.27	X / Y / Z =	36	36	40	R Middle Frontal Gyrus			

Cluster 4 (512 vox): Post-transplant face: T3>T4 (T> 2.58)

Maximum 01	T = 4.96	X / Y / Z =	-56	-46	44	L Inferior Parietal Lobule	-> Assigned to	left	Area PF (IPL)
Maximum 02	T = 4.69	X / Y / Z =	-48	-44	58	L Inferior Parietal Lobule	-> Assigned to	left	Area 2
Maximum 03	T = 3.64	X / Y / Z =	-52	-52	50	L Inferior Parietal Lobule	-> Assigned to	left	Area PF (IPL)
Maximum 04	T = 3.48	X / Y / Z =	-38	-54	60	L Inferior Parietal Lobule	-> Assigned to	left	Area hIP3 (IPS)
Maximum 05	T = 3.10	X / Y / Z =	-60	-54	34	L SupraMarginal Gyrus	-> Assigned to	left	Area PFm (IPL)

Cluster 5 (222 vox): Post-transplant face: T3>T4 (T> 2.58)

Maximum 01	T = 4.18	X / Y / Z =	48	18	24	R IFG (p. Triangularis)			
Maximum 02	T = 3.66	X / Y / Z =	48	22	32	R IFG (p. Triangularis)			

Cluster 6 (172 vox): Post-transplant face: T3>T4 (T> 2.58)

Maximum 01	T = 4.96	X / Y / Z =	-14	-96	26	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]

Post-transplant face: T3>T5

Cluster 1 (2845 vox): Post-transplant face: T3>T5(T> 2.58)

Maximum 01	T = 6.67	X / Y / Z =	54	-34	56	R Inferior Parietal Lobule	-> Assigned to	right	Area 1
Maximum 02	T = 6.48	X / Y / Z =	32	-62	58	R Angular Gyrus	-> Assigned to	right	Area hIP3 (IPS)
Maximum 03	T = 6.07	X / Y / Z =	14	-66	58	R Superior Parietal Lobule			
Maximum 04	T = 5.74	X / Y / Z =	10	-62	62	R Precuneus			
Maximum 05	T = 5.34	X / Y / Z =	-12	-66	60	L Precuneus	-> Assigned to	left	Area 7A (SPL)
Maximum 06	T = 5.30	X / Y / Z =	-34	-56	60	L Inferior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 07	T = 5.30	X / Y / Z =	46	-50	56	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP2 (IPS)

Maximum 08	T = 5.17	X / Y / Z =	-46	-44	56	L Inferior Parietal Lobule	-> Assigned to	left	Area 2
Maximum 09	T = 4.22	X / Y / Z =	48	-32	46	R Postcentral Gyrus	-> Assigned to	right	Area PFt (IPL)
Maximum 10	T = 4.08	X / Y / Z =	34	-42	50	R SupraMarginal Gyrus	-> Assigned to	right	Area 2
Maximum 11	T = 3.44	X / Y / Z =	34	-58	38	N/A			

Cluster 2 (590 vox): Post-transplant face: T3>T5 (T> 2.58)

Maximum 01	T = 6.97	X / Y / Z =	28	34	50	R Middle Frontal Gyrus
Maximum 02	T = 6.17	X / Y / Z =	38	38	38	R Middle Frontal Gyrus
Maximum 03	T = 3.35	X / Y / Z =	38	16	28	R IFG (p. Triangularis)
Maximum 04	T = 3.35	X / Y / Z =	40	18	26	N/A
Maximum 05	T = 3.21	X / Y / Z =	34	14	22	N/A
Maximum 06	T = 3.02	X / Y / Z =	48	18	24	R IFG (p. Triangularis)
Maximum 07	T = 2.94	X / Y / Z =	48	22	32	R IFG (p. Triangularis)
Maximum 08	T = 2.85	X / Y / Z =	42	26	26	R Middle Frontal Gyrus

Cluster 3 (464 vox): Post-transplant face: T3>T5 (T> 2.58)

Maximum 01	T = 5.05	X / Y / Z =	-12	-92	10	L Calcarine Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 4.62	X / Y / Z =	-12	-96	18	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 03	T = 4.59	X / Y / Z =	-14	-94	20	L Superior Occipital Gyrus	-> Assigned to	left	Area hOc4d [V3A]
Maximum 04	T = 4.38	X / Y / Z =	4	-90	0	L Calcarine Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 05	T = 2.83	X / Y / Z =	4	-80	-4	Cerebellar Vermis (6)	-> Assigned to	right	Area hOc1 [V1]

Post-transplant face: T4>T5

Cluster 1 (474 vox): Post-transplant face: T4>T5 (T> 2.58)

Maximum 01	T = 3.45	X / Y / Z =	-4	-74	10	L Lingual Gyrus	-> Assigned to	left	Area hOc1 [V1]
Maximum 02	T = 3.38	X / Y / Z =	20	-60	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 03	T = 3.37	X / Y / Z =	22	-58	6	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 04	T = 3.36	X / Y / Z =	14	-78	4	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 05	T = 3.33	X / Y / Z =	12	-80	6	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 06	T = 3.26	X / Y / Z =	8	-66	10	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 07	T = 3.22	X / Y / Z =	6	-68	12	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 08	T = 3.21	X / Y / Z =	24	-72	-4	R Fusiform Gyrus	-> Assigned to	right	Area hOc4v [V4(v)]
Maximum 09	T = 3.08	X / Y / Z =	14	-60	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]

Maximum 10	T = 3.08	X / Y / Z =	4	-74	4	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]
Maximum 11	T = 2.81	X / Y / Z =	16	-66	8	R Lingual Gyrus	-> Assigned to	right	Area hOc1 [V1]

Cluster 2 (339 vox): Post-transplant face: T4>T5 (T> 2.58)

Maximum 01	T = 4.15	X / Y / Z =	-40	-22	68	L Precentral Gyrus			
Maximum 02	T = 3.95	X / Y / Z =	-50	-32	56	L Inferior Parietal Lobule	-> Assigned to	left	Area 1
Maximum 03	T = 3.67	X / Y / Z =	-40	-34	70	L Postcentral Gyrus	-> Assigned to	left	Area 4a
Maximum 04	T = 3.59	X / Y / Z =	-30	-38	76	L Postcentral Gyrus	-> Assigned to	left	Area 4a
Maximum 05	T = 3.45	X / Y / Z =	-34	-34	74	L Postcentral Gyrus	-> Assigned to	left	Area 4a

Cluster 3 (332 vox): Post-transplant face: T4>T5 (T> 2.58)

Maximum 01	T = 3.82	X / Y / Z =	-16	-76	54	L Superior Parietal Lobule	-> Assigned to	left	Area 7A (SPL)
Maximum 02	T = 3.69	X / Y / Z =	-14	-62	36	L Precuneus			
Maximum 03	T = 3.43	X / Y / Z =	-20	-68	52	L Superior Parietal Lobule			
Maximum 04	T = 3.22	X / Y / Z =	-26	-58	54	L Superior Parietal Lobule			
Maximum 05	T = 2.65	X / Y / Z =	-26	-56	38	N/A			

Cluster 4 (195 vox): Post-transplant face: T4>T5 (T> 2.58)

Maximum 01	T = 4.40	X / Y / Z =	28	-48	44	N/A			
Maximum 02	T = 3.26	X / Y / Z =	44	-46	58	R Inferior Parietal Lobule	-> Assigned to	right	Area hIP2 (IPS)

Cluster 5 (168 vox): Post-transplant face: T4>T5 (T> 2.58)

Maximum 01	T = 3.94	X / Y / Z =	4	26	34	R ACC
Maximum 02	T = 3.05	X / Y / Z =	-2	18	46	L Superior Medial Gyrus
Maximum 03	T = 3.01	X / Y / Z =	-2	20	42	L MCC
Maximum 04	T = 2.73	X / Y / Z =	8	16	36	R MCC