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Don't bite my finger, look in the direction I am pointing

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Don't bite my finger, look in the direction I am pointing[☆]

First, we thank the editor for giving us the opportunity to react on Peter Brugger's comments on our article *Born to Adapt, but not in your dreams*. This will be a short reaction since Brugger's comment is actually not a comment on our approach or on the interpretation of the results, or on our theoretical viewpoint, or on the employed methodology. Indeed, he does not question these aspects at all. It is more an additional paper focused on authors who in the past asked similar or related questions. This, of course, is useful and it creates always a sense of humility in the minds of present authors who, indeed, often have to admit that they are part of a continuous stream of thoughts and that their own thoughts do not represent a unique highlight. This point of Brugger's paper is well taken when re-reading the end-line of our introduction.

Nevertheless, the question is what Bruggers comments add to the primary message of our modest paper, on top of the above mentioned feeling of historical awareness and modesty. Our message was that although the brain is a biological system of remarkable flexibility, continuously adapting to alterations in the periphery, at the same time it shows stability in other domains. The intactness of the experienced image of the body in the amputee's dreams reflects such stability. This is not at all a trivial finding but shows the multi-faceted character of concepts such as body image. The data of the older studies presented by Brugger are largely in accordance with the findings as presented in our article. So what can we learn?

Brugger refers to eight additional studies that were focusing (among others) on body awareness during dreams. These authors, of which the oldest one, (Katz, 1921), is not in the reference list, however, are not focused exclusively on the experienced body image in dreams. They stress a number of aspects related to limb amputation with corporal awareness in dreams as only one of the topics. For example, Appenzeller et al. (1969) are not interested in dreams per se, but question the effects of nervous lesions on phantom experience. Erwin Stetter (1950) describes extensively in 30 pages his subjective experiences as an amputee (and the experiences of others) in a very impressive and phenomenological style. As he indicated, it was "reine Phenomenologie... frei von jeder Theorie" (p. 142), ("it was pure phenomenology, free from any theory"). Other authors such as Shukla et al. (1982) embrace a psychoanalytic framework when they describe phantom phenomena. Also in Poeck (1969) the primary focus was on phantom phenomena and not on dream related questions.

So, the point was not that we were unable to read German, or that we were historically totally naive, but we simply did not need these authors for making our point that in dreams of amputees the body image seemed to be untouched by the dramatic peripheral changes that had taken place. Furthermore, the theoretical framework for our study was neuroscience, not psychoanalysis, psychiatry or phenomenology. Of Brugger's eight additional authors only Lindsey's (1984) paper is focused on dreams after amputation. However, that article seems not to exist, at least it can not be found in the British Journal of Psychiatry at the indicated page-place or on any other place. Furthermore, there seems to be a strange overlap with MacDonald (1984) in bibliographic data.

Hence, Brugger has not written a comment on our paper but composed a more less stand-alone paper on phantom phenomena, which is only indirectly related to our question "does an amputee dream of his intact body or of his amputated body" Such a paper, however, is in itself elegant and useful and makes the picture of these extremely complex phenomena more complete, but it is not a comment. The article mentioned in this text all refer to the reference list of Brugger.

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