

Forum: Definitions

Asomatognosia

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1. Definition

Asomatognosia broadly refers to a unilateral disturbance of *body ownership* (i.e., the sense, feeling or judgement that my body belongs to me and is ever present), typically occurring after right-hemisphere stroke. Specifically, this disturbance includes abnormalities in various facets of body ownership such as the experienced *existence*, *visual self-recognition*, and *sense of belonging* of contralesional body parts.

Asomatognosia has typically been distinguished from *somatoparaphrenia*, in which there is the occurrence of illusionary, confabulatory or delusional ideas of *disownership*, or *misidentification* regarding the affected body part.

A disturbance in the *existence* of body parts means that patients may experience an absence of the affected limb, such as the feeling that the body part is fading, missing, or has disappeared. Impaired *visual self-recognition* includes both non-recognition of affected body parts (whereby the patient does not visually recognize the body part as his/her own but does not attribute its identity to anyone else even when asked) and misrecognition of body parts. Two types of misidentification may occur: (1) the patient attributes the body part of another person (e.g., doctor, nurse, family member) to the self (*other-as-self misattribution*), and (2) the patient misattributes their affected body part as being another's (*self-as-other misattribution*).

When non-recognition or misidentification occurs beyond the visual domain, then it can be said that the patient's sense that the physical body belongs to the psychological self (the sense of body ownership) is

1 affected more generally. The sense of body ownership can be described as the combined outcome of both
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4 bottom-up, multisensory integration processes and top-down beliefs and expectations.

5 Asomatognosia and somatoparaphrenia can be distinguished from a number of similar symptoms. There
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7 are many other types of delusional misidentifications, where the patient's whole body or face, and/or
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9 elements of the spatial or social environment may be misidentified or reduplicated. However, these are not
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11 typically understood as asomatognosia or somatoparaphrenia, as the latter are unilateral disorders
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13 affecting contralesional body parts. Distinctions are also made with unawareness of illness (anosognosia),
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15 and apathy or lack of concern in relation to a condition, including the paralysis of a limb (anosodiaphoria);
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17 these conditions refer to a typically contralesional disturbance of *awareness* regarding limb *function* rather
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19 than limb *ownership*, and they can double dissociate from asomatognosia. Other forms of aberrant limb
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21 perception are *personification* of the affected limb (where the limb is regarded as something apart from the
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23 rest of the body and conferred a separate personality or identity), *limb objectification* (when patients refer
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25 to their limb as an object, such as a fake hand or bone), and *misoplegia* (an intense dislike of the affected
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27 limb such that the patient exhibits aggressive behaviours towards the affected side). Finally, asomatognosia
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29 is often associated with unilateral spatial neglect, in particular *personal neglect*. Nevertheless, the two
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31 conditions can double dissociate and are considered distinct; in patients with asomatognosia there is an
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33 aberrant belief regarding the contralesional limb which is resistant to correction, whereas patients with
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35 personal neglect recognise the contralesional limb as their own when attention is diverted towards the
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37 neglected body part. Clinically, the above phenomena are not always sharply demarcated, and disturbances
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39 may co-occur, alternate or fluctuate in degree within a single patient, over time and depending on context.
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50 **2. Label**

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52 *Asomatognosia* is currently the most widely used label. Although the term *hemisomatognosia* indicates the
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54 unilateral nature of the disorder and was used in early literature, symptoms described under this term
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56 included a broad range of spatial deficits (e.g., neglect) and unawareness phenomena (e.g., anosognosia).
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Hence, asomatognosia is currently accepted as referring to a specific, contralesional disorder of body ownership.

Several other variants on the term asomatognosia can be found in the literature; however, these variants pre-date the current conceptualisation of asomatognosia, and have not been applied consistently across different studies: *conscious hemisomatognosia*, *non-conscious hemisomatognosia*, *non-verbal asomatognosia*, and *verbal asomatognosia*. *Disturbed Sensation of Limb Ownership* is another, recently introduced term, typically used in a research setting, which does not refer to a specific condition, but clusters aberrant attitudes concerning ownership of a limb, which are not necessarily associated with each other. *Pathological embodiment* and *visual ownership capture* have been recently introduced to describe automatic or spontaneous illusory ownership of another (i.e., real person or prosthetic) limb seen in the canonical position.

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