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REVIEW ARTICLE

Merleau-Ponty's sexual schema and the sexual component of *body integrity identity disorder*

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Abstract *Body integrity identity disorder* (BIID), formerly also known as *apotemnophilia,* is characterized by a desire for amputation of a healthy limb and is claimed to straddle or to even blur the boundary between psychiatry and neurology. The neurological line of approach, however, is a recent one, and is accompanied or preceded by psychodynamical, behavioural, philosophical, and psychiatric approaches and hypotheses. Next to its confusing history in which the disorder itself has no fixed identity and could not be classified under a specific discipline, its sexual component has been an issue of unclarity and controversy, and its assessment a criterion for distinguishing BIID from apotemnophilia, a paraphilia. Scholars referring to the lived body—a phenomenon primarily discussed in the phenomenological tradition in philosophy—seem willing to exclude the sexual component as inessential, whereas other authors notice important similarities with *gender identity disorder* or transsexualism, and thus precisely focus attention on the sexual component. This contribution outlines the history of BIID highlighting the vicissitudes of its sexual component, and questions the justification for distinguishing BIID from apotemnophilia and thus for omitting the sexual component as essential. Second, we explain a hardly discussed concept from Maurice Merleau-Ponty's *Phenomenology of Perception* (1945a), the *sexual schema*, and investigate how the sexual schema could function in interaction with the body image in an interpretation of BIID which starts from the lived body while giving the sexual component its due.

Keywords BIID · Apotemnophilia · Lived body · Merleau-Ponty · Sexual schema · Body image

Introduction

In 1997 and again in 1999, Robert Smith amputated the healthy limb of a patient who felt a desperate need to have a leg amputated. The Scottish surgeon reported to the *British Medical Journal* that these patients belonged to a small subgroup who wanted the operation because they felt incomplete with four limbs but would feel complete with three, whereas the larger group found the concept of amputation sexually arousing (cf. Dyer 2000, p. 332). The report faithfully reflects the outcome of the recent history of the disorder. A closer look at its history indeed shows a growing reluctance to the sexual component of what is now called *body integrity identity disorder* (BIID). The clearest indication for this growing reluctance is the renaming of the phenomenon from '*apotemnophilia*', a term first used in 1977, into 'BIID', a term coined in 2004 by Michael First (cf. First 2004). The renaming is supported by a number of survey results (First 2004; Blanke et al. 2009) that demonstrate that the sexual component is not the *primary* element in this unusual desire.

In the following sections, the history of BIID is explored with special attention for the assessment of its sexual component. After that, we turn to Maurice Merleau-Ponty's notion of sexual schema and the role it can play in conceptualising the disorder. We end with some remarks on medical decision making in the case of BIID.

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First case studies and naming of the disorder

Before its renaming, apotemnophilia was clearly situated in the domain of sexual and erotic life. Apotemnophilia (literally 'amputation love', from 'apo', away; 'temno', to cut; 'philo', to love) initially covered both the desire for amputation to be performed on one's own person and the preference for an amputated sex partner.[1] Apotemnophilia was considered as a paraphilia, i.e. a disorder of sexual arousal. According to the DSM-IV-TR, paraphilias are recurrent, intense sexual urges, fantasies or behaviors that involve unusual objects, activities or situations and cause clinically significant distress or impairment in social, occupational or other important areas of functioning. More precisely, apotemnophilia was mostly understood as a kind of fetishism characterized by the use of an amputated limb for physical or mental sexual arousal. A fetish is defined as an object that provides sexual gratification obtained from other than the genital parts of the body, or as a condition in which non-living objects are used as the exclusive or consistently preferred method of stimulating sexual arousal (cf. Lowenstein 2002, p. 135). Importantly, apotemnophiles are not psychotic and do not suffer from delusions. The desire for amputation does not issue from delusion or hallucination, and the desire is recognized as unusual and bizarre by the one who has the desire.

The first article published about two patients that desire to have a leg surgically amputated above the knee appears in 1977 (cf. Money et al. 1977).[2] One of the patients wrote: "(…) the image of myself as an amputee has as an erotic fantasy (each one different) accompanied EVERY sexual experience in my life (…)." (Money et al. 1977, p. 117). For the second patient, amputee fantasies were often present, but were not an absolute prerequisite for his sexual arousal. Money draws our attention to the following remarkable facts. First, the patients themselves perceived a relationship between their amputation desire and transsexualism on the basis of the self-demand surgical alteration of their body and their bisexual orientation. Second, and next to their sexual fantasies, both patients entertain imagery in which they overcome the adversity of their (desired) handicap and emerge as superior or supernormal in achievement. And third, the patients offer a psychoanalytically inspired explanation for their desire in terms of a psychic trauma related to forbidden wishes, castration fear and an authoritarian or rejecting father.

Earlier descriptions of amputation desire exist. In 1890, George Frank Lydston describes it in terms of sexual perversion, and Louis S. London and Frank S. Caprio in terms of sexual deviation in 1950 (cf. Everaerd 1983, p. 285). It is even mentioned as early as in 1785 by Jean-Joseph Sue (cf. Johnston and Elliott 2002, p. 431). Despite the early recognition of this unusual desire, in the late 1970s there is no clue about its aetiology nor an agreed-upon method of treatment. Further cases moreover do not reveal the existence of common experiences in pre-puberty, the period of onset of amputation fantasies. When the Dutch psychologist Walter Everaerd publishes in 1983 another case of apotemnophilia, it is clear that mr. A.'s history differs in important respects from Money's two patients. Mr. A. is homosexual and as a child attracted to a boy with a wooden leg, whom he considers happier then himself possessing both legs. Mr. A. starts identifying with boys with a peg-leg, and later on, the possession of a peg-leg of his own becomes a necessary condition for his personal happiness. The use of crutches forms a temporary solution, but it is only the amputation of his leg and the possession of a peg-leg that would give him a feeling of physical well-being and mental happiness. Photos and drawings of amputated boys and men (mostly war victims) take on erotic importance and when masturbating amputated boys and men play the role of partner in his fantasies.

Own amputation nevertheless loses sexual meaning, and his amputation wish slowly turns into a matter of personal and bodily identity. Mr. A. says he only could feel *complete* once his leg is amputated. According to Everaerd (1983), besides the wish to adapt his body to the image of it that would make him happy, Mr. A.'s case does not show any resemblance to transsexualism. This contrasts with the two patients described by Money et al. (1977), who not only have homosexual but also heterosexual experiences, and who manifest doubts concerning their sexual identity. For Mr. A., the amputation desire is first of all a matter of bodily identity. These dissimilarities, however, do not exclude that the three cases share not only the simulation but also (and mostly simultaneously) the eroticization of a leg stump.

In the early eighties we thus find a rather suggestive indication for the future distinction between apotemnophilia and BIID, based upon the possibility that the desire for amputation is not necessarily primarily *sexually* motivated. For the first time, apotemnophilia seems released from its prominently fetishist and thus sexual character, and becomes a matter of bodily identity and one's body image. In the eighties and the nineties of the twentieth century, more cases are identified, but the first systematic studies only just happen in the beginning of the next century. One of the central issues in these systematic studies will precisely be the assessment of the importance of the sexual component.

[1] A distinction is made on the basis of a traditional paraphilia classification in pairs, in which one term is reciprocal to the other (e.g. sadism and masochism). In this case, the pair consists of autoapotemnophilia (self-directed) and alloapotemnophilia (other-directed) (cf. Money et al. 1977, p. 124).

[2] In the same year, a second publication by Wakefield et al. (1977) appears that describes another case.

Further distinctions: apotemnophilia and acrotomophilia

Although little seems to happen or change in the period between 1983 (the year of Everaerd's publication) and 2000, it is again John Money, together with Kent Simcoe, who publishes in 1986 the case not of an apotemnophile, but of its antipode or its reciprocal, an acromotophile.[3] Apotemnophilia and acrotomophilia are now clinically identified, separate paraphilias. An acrotomophile is sexually excited by the stump of the amputee partner, whereas in apotemnophilia the amputation desire applies to one's own body. Clinical experience shows however that a neat distinction is sometimes difficult to maintain. Money and Simcoe's (1986) case study describes a man who had a circumcision as a child and who feared that his penis was gone. When unbandaged, he found out that the head of his penis was deformed and this remained so. He was a fat kid, for whom gym class became hell, and he hated to appear nude in the shower room. The thought occurred to him that as an amputee he would not have to run the hurdles, and he started simulating privately being an amputee. "Losing a leg would beat losing my penis", he writes (Money and Simcoe 1986 p. 45). Pretending to be an amputee became his sole method of masturbating. Slowly, however, he transferred his fantasy of being himself an amputee to having an amputee partner, and in college he masturbated while fantasising amputations of some form or another upon a female acquaintance. Yet, so he writes, if he could go back to a particular point in his life, he would be thirteen and stick his left knee under a passing train, becoming the amputee that he was practicing at that age. "Being the amputee, I would not have transferred my desire to the opposite sex and would have avoided many years of pain, frustration and exhaustion." (Money and Simcoe 1986, p. 48) Nonetheless, he does not consider himself as a 'wannabe' (i.e. apotemnophile) but as a 'devotee' (i.e. acrotomophile).

According to the 1986 publication, there is no explanation for paraphilias in general or for acrotomophilia in particular. Mostly, it is a process that starts in early childhood, long before puberty, and "probably as a response to the thwarting and warping of normophilic development" (Money and Simcoe 1986, p. 49). In the 1960s, in the US and later in Europe, a treatment program is first used that combines hormonal (antiandrogenic) and counselling therapy, without much result.

Cases of amputation fetishism in the sense of acrotomophilia are rare, and this is one of the reasons why it has received minimal attention in the psychiatric literature. However, as Wise and colleague point out (Wise and Kalyanam 2000), it may be more common than thought, in view of the many pornographic Internet sites that offer material for such fetishists. Wise reports the case of a (non-psychotic) man with a long-standing amputee fetish, who amputated his penis. This is surprising, since the man was an acrotomophile who at no time wished to personally have an amputated limb. His amputee fetish had nonetheless evolved into eroticised genital mutilation. It is the first report that connects genital self-mutilation and amputation-fetishism, but in the overview of the literature Wise and colleague offer, a clear distinction between apotemnophilia and acrotomophilia is absent.

Despite Everaerd's alternative suggestion about bodily identity as alternative motivation to a sexual one, and Money's distinction between apotemnophilia and acrotomophilia, publications that appear before the turn of the millennium and in the early 2000s, clearly and intimately connect apotemnophilia to one's sexual life and erotic desires. When in 2003 a new case report is published (Bensler and Paauw 2003), 'apotemnophilia' is still in use as a term and interpreted as a "disorder of self-desired amputation [is] related to the erotic fantasy of undergoing amputation of a limb and subsequently overachieving despite a handicap" (Bensler and Paauw 2003, p. 674).

But notwithstanding this still agreed-upon sexual interpretation, two different lines of approach stand out. On the one hand, there is the behavioural point of view represented by Money et al. (1977, 1984; Money and Simcoe 1986; see also Lowenstein 2002), in which masturbatory experiences with amputee images or simulation behaviour are reinforced by subsequent similar masturbatory experiences (cf. Money 1984 for children's sexual rehearsal play and the notion of 'lovemap'). On the other hand, there is the psychodynamic line of approach (e.g. Stoller 1974), in which amputee fetishism is interpreted, e.g., as an erotic manifestation of hatred toward maternal figures, in terms of castration fear, as a concrete form of unconscious fantasies, as defence against pure expression of sexuality or otherwise (see Lowenstein 2002 for a—non-favourable—overview of psychoanalytic interpretations).

By 2003, fewer than a dozen case reports of apotemnophilia exist in the literature, and notwithstanding the existence of different lines of approach, apotemnophilia is consistently considered as a paraphilia, and as such belonging to the domain of one's sexual life. Sexual fantasies and fantasies of overachievement notwithstanding a handicap play a major role. This situation, or its interpretation, changes when the first systematic study with more than 50 subjects is published.

[3] In 1977, apotemnophilia and acrotomophilia were not clearly distinguished by Money. Both fell under the name of apotemnophilia, although the latter had two faces: self-directed or other-directed (see also note 1).

Table 1 Absolute frequencies of sex (n = 52) and relative frequencies of sexual orientation (figures from First 2004)

Male	47	Heterosexual	61%
Female	4	Homosexual	31%
Intersexed	1	Bisexual	7%

Systematic studies and changing interpretations: from fetishism to BIID

Amputation desire motivated by sexual arousal but also by body identity issues

In 2004, a first systematic study by First was published.[4] Structured interviews of 52 non-delusional subjects were conducted by telephone. The survey consisted of the following individuals (Table 1).

All individuals were self-identified as having a desire to have an amputation, and more than a quarter of them had had a surgical or self-inflicted amputation, with more than half of them having a major limb (arm or leg) amputated (Table 2).

Psychotherapy or medication did not change the intensity of the desire. Those who had an amputation at the desired site felt better than they ever had and no longer had the desire for amputation.

Most subjects reported no abnormal or different perception of the limb they wanted to have amputated, but the questionnaire also provided answers to the following questions (Table 3).

First focuses on the motivations underlying the desire for amputation. According to First, the most common reported reason for desiring an amputation was the feeling that it would correct a mismatch between one's anatomy and one's sense of 'true' self (identity). It is the first time that the issue of *bodily identity,* i.e. the feeling of self in relation to one's anatomy, is highlighted. Moreover, as we shall see, this happens at the expense of the sexual dimension. It is nevertheless (and somehow ironically) on the basis of similarities with Gender Identity Disorder (GID) that First proposes to consider the condition as an unusual dysfunction of the development of one's fundamental sense of anatomic or bodily identity. Although an earlier case report also mentioned that the subject feels 'incomplete' with the undesired limb (cf. the case report by Everaerd 1983, where the sexual dimension is less prominent although the stump is eroticised), this aspect becomes central in a case introducing the survey by First (2004). However, this central position of body identity does not mean that the sexual component is absent, because the subject "(…) felt more 'sexual' while imagining himself as an amputee, and that as an adolescent, he would become sexually aroused when he pretended to be an amputee." (First 2004, p. 920). First nonetheless considers sexual arousal related to the fantasy of a life as an amputee as 'only a minor component' (First 2004, p. 920) and the wish to feel complete as primary. First's survey (2004) provides us with the following information about restoring one's true identity as primary or secondary motivation for desiring amputation (cf. Tables 4 and 5).

Here are a number of statements (First 2004, p. 922): "[After the amputation] I would have the identity that I've always seen myself as." "At some moment, I saw an amputee and I understood that that's the way I should be." "I feel like an amputee with natural prostheses—they're my legs but I want to get rid of them—they don't fit my body image." "I feel myself complete without my left leg… I'm overcomplete with it." "Sounds paradoxical—I would feel whole without my leg." "I felt like I was in the wrong body; that I am only complete with both my arm and leg off on the right side."[5] Importantly, the results from the open-ended narratives also indicated the proportion of sexual excitement as primary or secondary reason for desiring amputation.

The proportion of sexual motivation and body identity motivation

The next two sections critically assess not the data provided by First (2004), but his specific representations of the data. The reason for doing this rather extensively, is that subsequent literature on BIID uncritically relies on First's representations of the data from the survey. Our aim is to provide the reader with alternative representations that can support conclusions different from the widely accepted conclusions by First.

Understandably, First wanted to investigate the occurrence of the motivation of restoring true identity and the occurrence of the motivation of sexual arousal, since each of these motivations has been proposed as the core feature of the condition.

Table 6 shows that 42% of the subjects (in bold) had both motivations for desiring an amputation, and all of these (with one exception) reported restoring identity as primary and sexual arousal as secondary motivation. From Table 6, we can calculate the following figures.

[4] Earlier surveys exist. The earliest survey was made in 1976, by Ampix, a company selling stories and photographs of amputees. A second one was made in 1996 (see Lawrence 2006 for details). These surveys, however, recruited acrotomophiles rather than apotemnophiles, although in the second survey, of 50 devotees, 22% agreed that they would like to be an amputee (cf. Lawrence 2006, p. 264).

[5] For an account of how experiences of in- and overcompleteness may issue from the normative dimension of an unusal body-model, (cf. De Preester et al. 2009).

Table 2 Relative and absolute frequencies of surgical or self-inflicted amputation of a major limb and of fingers or toes. (figures from First 2004)

Amputated individuals	27%			
	Major limb amputation (arm or leg)	17% (n = 9)	With dangerous or life-threatening methods	67% (n = 6)
			Enlisting a surgeon for amputation	33% (n = 3)
	Other (self-inflicted) amputations (fingers or toes)	10% (n = 5)		

Table 3 Relative frequencies of positive answers to five questions from the survey by First (2004)

(1) The limb felt 'like it was not my own'	13%
(2) Desire for amputation began soon after exposure to an amputee (in two cases images of an amputee)	56%
(3) Preoccupation with becoming an amputee started by pretending to be one	92%
(4) Sexual attraction to amputees	87%
(5) I ever had feelings of wishing to be the opposite sex/the feeling of being in the body of the wrong sex	19%

Table 4 Relative and absolute frequencies for restoring one's true identity as primary or secondary reason for desiring amputation (in an open-ended narrative) (figures from First 2004)

Motivation for amputation	Primary reason	Secondary reason
Restoring one's true identity	63% (n = 33)	10% (n = 5)

Table 5 Relative frequencies of sexual excitement as primary or secondary reason for desiring amputation (in an open-ended narrative) (figures from First 2004)

Motivation for amputation	Primary reason	Secondary reason
Sexual excitement	15%	52%

Restoring identity is mentioned as an important (i.e. primary or secondary) motivation in a big majority of the cases, and in most of these cases, it is mentioned as primary. Sexual arousal is also mentioned as an important motivation (i.e. primary or secondary) in a big majority (but less big than identity) of the cases, but only in about a quarter of these cases, it is mentioned as primary. The percentages (cf. Table 7) should be correctly interpreted, since they don't indicate the percentage of identity-motivation *versus* sexual motivation, but the importance of each (i.e. first or second motivation) if mentioned.

Co-occurrence of sexual motivation and body identity motivation

The proportion of co-occurence of identity-motivation and sexual motivation can also be represented in another way, and we can also ask in how many cases these motivations occur in an isolated way. These figures will be important for assessing the conclusions that First (2004) draws from his own representation of the figures. Let us first look again at the co-occurrence of both motivations.

Of the individuals with restoring identity as an important reason, more than half of them also has a sexual motivation as an important reason. Of the individuals with sexual arousal as an important reason, a large majority also has an identity motivation (cf. Table 8). We now look at the number of individuals in the survey with a relatively 'pure' identity-motivation (i.e. without sexual arousal as an important reason) and with a relatively 'purely' sexual motivation (i.e. without restoring identity as an important reason). About one-third of the individuals had a 'pure' identity-motivation and about one-fifth a 'purely' sexual

Table 6 Co-occurrence of restoring identity and sexual arousal as primary and secondary motivations for desiring amputation (absolute and relative frequencies) (from First 2004)

	Sexual arousal as primary	Sexual arousal as secondary	No sexual arousal
Restoring identity as primary	–	**n = 21 (40%)**	n = 13 (25%)
Restoring identity as secondary	**n = 1 (2%)**	–	n = 5 (10%)
No restoring identity	n = 7 (13%)	n = 4 (8%)	n = 1 (2%)

Bold values indicate individuals having both motivations

Table 7 Restoring identity and sexual arousal as important, as primary and as secondary motivation (relative frequencies)

	Important motivation		
Restoring identity	77% of which	Primary	85%
		Secondary	15%
Sexual arousal	63% of which	Primary	24%
		Secondary	76%

Table 8 Relative frequencies of the co-occurrence of identity-motivation and sexual motivation

	Important motivation		
Restoring identity	77% of which	With sexual motivation	55%
		Without sexual motivation	45%
Sexual arousal	63% of which	With identity motivation	67%
		Without identity motivation	33%

motivation. We already knew that (with one exception who had neither motivation) the other individuals had a combined motivation (cf. Table 9).

Tables 7, 8 and 9 provide us with figures that enable an interpretation that differs from First's interpretation (which is based on Tables 4, 5, 6, 7). It is important to notice in what follows that First does not mention and does not work with any percentages of the 'pure' cases or important reasons, but with the percentages of *primary* motivation.

Discussion: arguments for BIID as a new diagnostic category

First proposes the diagnosis of apotemnophilia for the 15% for whom sexual excitement was the primary reason (identity motivation secondary or absent; see Table 5) in the open-ended narrative, and an alternative diagnostic category for the others. According to First, the diagnostic category that most resembles the phenomenology of non-apotemnophilic subjects who nonetheless desire an amputation is Gender Identity Disorder (GID). The following key features are shared: (a) an uncomfortable feeling with one's own anatomical identity (resp. presence of (a) certain limb(s); anatomical sex); (b) a felt sense of the desired identity (resp. being an amputee; being of the other sex); (c) onset in childhood or early adolescence; (d) successful treatment by surgery for some; (e) simulation of the desired identity; and finally, (f) paraphilic sexual arousal when fantasising that one possesses the desired identity. First proposes to conceptualise the non-apotemnophilic desire as "[…] an extremely unusual dysfunction in the development of one's fundamental sense of who (physically) one is, and that it tentatively be called 'Body Integrity Identity Disorder'. (An alternative term to apotemnophilia is needed since the sexual arousal component is primary in only a relatively small minority of cases.)" (First 2004, p. 926).

Table 9 Relative frequencies of 'pure' and combined motivations

'Pure' identity-motivation	35%
'Purely' sexual motivation	21%
Neither motivation	2%
Combined motivation	42%

As already mentioned, First proposes to maintain the diagnosis of apotemnophilia for the 15% for whom sexual excitement was the primary reason in the open-ended narrative. There is, however, a catch, since this leaves out the 52% who endorses sexual arousal as the secondary (and thus not minor!) motivation (see Table 5). It would therefore have been a stronger argument to focus on the 21% (a larger percentage) that has a 'purely' sexual motivation (see Table 9).

First also claims that "for the majority (73%) for whom the primary goal of amputation is to match their body to their identity, no DSM-IV-TR diagnosis even remotely fits." (First 2004, p. 926). First does not use the proportion of motivation, but instead talks of 'goal' now. His claim nonetheless remains surprising because 73% seems to be a percentage resulting from adding the 63% (n = 33) that reported restoring true identity as primary reason *and* the 10% (n = 5) that reported it as a secondary reason (see Table 4).[6] If First wants to reserve a separate diagnosis for the 15% for whom sexual arousal is a *primary* motivation, he should have chosen accordingly for the 63% (and not 73%) for whom body identity is a *primary* motivation (see Table 4). This would change the picture, but the problem is that neither option takes into account the importance of the secondary motivation for diagnosis.

Therefore, and alternatively, he could as well have categorised under 'apotemnophilia' both the percentage of subjects that have sexual arousal as primary *or* as secondary reason (see Table 5), which would result into 67% on basis of the data he provides. This would also change the picture considerably, but it would of course produce an overlap with subjects already categorised under BIID. First's reason for making the opposite move (and thus for classifying subjects with a sexual motivation as

[6] The percentages in First (2004) Table 1 p. 922: 'Reasons provided (in open-ended narrative) for wanting amputation' and in Table 3, p. 924: 'Co-occurence of restoring identity and sexual arousal as motivations for desire for amputation' differ with n = 1 for 'Restoring true identity as an amputee' (with −1 for primary reason and +1 for secondary reason), but this does not considerably influence the percentages. Based on the percentages of Table 6 (this article), the two percentages together even are as high as 77%.

secondary under non-apotemnophilic BIID), takes into account that identity is more often a primary motivation then sexual arousal is. It is, however, questionable if this is argument is sufficiently strong for such a move, since *both* are important motivations.

First would have had a stronger case for a new diagnostic category if he had focussed on the 35% that has a 'pure' identity-motivation (see Table 9). Of course, this leaves 42%, having both motivations (see Table 9), in limbo, but it would imply a recognition not just of the "relatively small minority of cases" (First 2004, p. 926) of apotemnophiles for whom the sexual arousal component is primary (15%, see Table 5), but instead of a majority of subjects (42%) who have both motivations, and of two not so small minorities (35% and 21%) that have only one of both motivations (see Table 9).

In other words, to consider 73% of the subjects as in need of an alternative diagnosis is not the only possible conclusion and probably even not the most warranted conclusion that can be drawn from First's survey. First, the choice for certain percentages leaving out others is not cogently argued for and a priori supports the need of a new diagnostic category. Moreover, it does not lead to the best comparisons of subgroups. Second, the main reason for the acceptance of BIID as a diagnostic category would be "since the sexual arousal component is primary in only a relatively small minority of cases" (First 2004, p. 926). Although this is correct, it is not a cogent argument for accepting BIID as a separate category, and it does not take into account the existence of sexual arousal as a secondary and thus still important motivation for 52% of the subjects now classified under BIID. Focussing on the 35% with a relatively pure identity-motivation implies less spectacular percentages but the author would have had a stronger case for introducing a category for non-apotemnophilic subjects. What is at issue, therefore, are the reasons and the importance of the reasons for classifying individuals under the new category of BIID.

Philosophical approval of the distinction BIID—apotemnophilia and the rise of neurological hypotheses

The category 'BIID' became nonetheless successful,[7] and started to spread also in the philosophical community. Yet the separation between BIID and apotemnophilia was also a fateful one, in the sense that bodily identity and sexuality became unwarrantedly distributed over respectively BIID and apotemnophilia. Consequently, and most probably wrongfully, the sexual component was rather quickly shoved aside in philosophical considerations of BIID. The background of this move is an a-sexual consideration of body identity and body image in mainstream philosophical literature. E.g., Bayne and colleague (Bayne and Levy 2005) prefer the hypothesis of BIID, only mentioning that it "is increasingly gaining favour" (Bayne and Levy 2005, p. 76). They thus focus on the issue of body identity and the lack of correspondence between the objective body and one's experienced body, more precisely between the anatomical body and one's body image. 'Body image' is defined as "the consciously accessible representation of the general shape and structure of one's body" (Bayne and Levy 2005, p. 76), based on visual, proprioceptive and tactile sources—a definition roughly following Shaun Gallagher's work (e.g. Gallagher and Cole 1995)[8]. The sexual component is considered not essential for BIID and the major support consists of a reference to First's 15% of subjects that are primarily sexually motivated, without discussing the relation between identity-motivation and sexual motivation, and without paying attention to 'pure' motivations (identity *or* sexual). Moreover, a very similar hypothesis based on a tension between body image and the physical body, relying on Merleau-Ponty's (1945a, b) account of the lived body has first been formulated in the context (and at the heart) of transsexual desire already in 1998 (Rubin 1998).

The issue of body identity in BIID is thus further explored without paying much attention to the sexual component of it. Undoubtedly, this approach offers many valuable insights into issues such as bodily integrity, e.g., in the domain of BIID or limb transplantation (cf. Slatman and Widdershoven 2009; Slatman and Widdershoven 2010). Bodily integrity or wholeness is not merely about the physical body, but also or even in the first place about the subjective bodily experience of wholeness (Slatman and Widdershoven 2010). This philosophical approach is in line with the importance phenomenological philosophers attribute to the lived body, i.e. the body as it is lived and experienced from one's own, first-person-perspective. The lived body can differ from one's objective, anatomical body—a difference possibly leading to the experience of a discrepancy or mismatch (e.g. in the case of accidental amputation) between one's physical body and one's body image or sense of bodily identity.

A neurological point of view supports this approach in terms of a mismatch between the physical or objective and the subjective or lived body also in the case of BIID. For example, and in line with the earlier (2004) survey by First, a new (2009) survey with semi-structured interviews with

[7] Earlier, in 2000, Frith and colleague (Furth et al. 2000) proposed the name Amputee Identity Disorder (see Lawrence 2006) but the name did not catch on.

[8] Body image is distinct from body schema. For a clarification, cf. note 11.

20 participants was conducted by Blanke and colleagues. In open-ended questions, all participants of this recent survey answered that they desired the amputation because a specific body part did not belong to their body and because their physical body did not match the 'image' or 'idea' they had of their own body. In close-ended questions, 85% opted for the answer that an amputation would make them feel whole again, 70% that it would make them 'feel satisfied and elated inside, and 65% chose for 'feeling sexually excited'. Blanke emphasises that the latter motivation was rarely the main reason, and also refers to the earlier study by First (2004) to support this claim.

In the same line of approach, neuropsychologists like Hilti and colleague (Hilti and Brugger 2010) defend a 'pure form' of amputation desire, i.e. "relatively uncontaminated by aspects related to sexual identity" (Hilti and Brugger 2010, p. 321). They suggest that BIID has a neurological basis, in that it is due to a disturbed integration of multisensory limb information into a coherent cerebral representation of one's own body as whole (see also Blanke et al. 2009; De Preester et al. 2009), especially in the right superior parietal lobule (for empirical support, cf. De Preester et al. 2009; McGeoch et al. 2009; Brang et al. 2008). This lack of integration in a neural body representation would result in a lack of animation (*Beseelung*) of the limb at stake, the amputation of which is consequently desired. This situation is conceptualised as a state of 'incarnation without animation' (Hilti and Brugger 2010).

The new classification of BIID for cases in which body identity or a feeling of wrong embodiment are primary does not solve all problems concerning diagnosis. For example, Donix and Reuster (2007) caution not to establish too hastily new syndrome entities in descriptive terms. What is needed is more research in the already complex field of body identity disorders more generally. The new category of BIID with its focus on uncontaminated forms and the mismatch between a body image and the physical body is theoretically clear, but does not easily match with the clinical complexity of subjects with amputation desire.

Blanke and colleagues nonetheless avoid labels such as 'BIID' or 'apotemnophilia' and avoid concluding to a new diagnostic category (or to a symptom of a neurological or psychiatric condition). They prefer searching for possible neurological mechanisms, and their survey leads to the above mentioned hypothesis of "asomatognosia due to disturbed integration of multisensory information of the affected body parts into a coherent cerebral representation of the own body" (Blanke et al. 2009, p. 181). Left-sidedness, limb specificity and somatosensory disturbances of the affected limb are the main support for their hypothesis that the condition is due to abnormal mechanisms in the right fronto-parietal cortex, but a number of important problems regarding this support remain (for details, cf. Blanke et al. 2009).

Other authors have formulated earlier similar neurological hypotheses. Brang and colleagues (2008) have rejected the psychological origin of amputation desire and also its interpretation as a sexual paraphilia. They have forwarded the hypothesis that a coherent sense of body image is lacking and that "apotemnophilia arises from congenital dysfunction of the right superior parietal lobule and its connection with the insula" (Brang et al. 2008, p. 1305). This dysfunction would underlie the discrepancy between the body image and the physical body. The hypothesis was tested by measuring skin conductance response above and below the line of desired amputation on each leg of two individuals. The results showed significant differences between the desired and undesired leg (or leg part).

Although a neurological hypothesis offers a number of advantages for explaining the specificity of locus of desired amputation and the more frequently occurring preference for the left body side, a number of difficulties stand out. First, the desire sometimes, and possibly repeatedly, switches body side. Second, the choice of body side sometimes seems to be chosen from a functional point of view (e.g. in order to be able to drive). Third, the fact that many or even most wannabes plan to use a prosthesis remains unexplained by the hypothesis that the corresponding body part does not belong to their body image. Fourth, the preference for leg over arm amputation remains unexplained, and current fMRI studies do not seem to support the idea that a specific brain dysfunction is solely responsible (cf. Kasten 2009). Earlier, attention has been drawn to individuals who obtained the desired amputation, but experienced a shift to a previously unaffected limb (cf. Sorene et al. 2006) or to individuals who obtained the desired amputation, but reported phantom limbs (Hilti and Brugger 2010). Kasten (2009) also draws our attention to the fact that most wannabes fantasise of an ideal body image and that many wannabes consider amputees as heroes who are in charge of their lives notwithstanding the constraints imposed by an amputation (cf. supra fantasies of overachievement). Also, the individuals involved often point to similarities with GID. According to Kasten (2009), in order to arrive at a more comprehending view of BIID, three axes have to be taken into account: brain dysfunction, psychological components (fantasies of overachievement, perhaps related to a sense of inferiority) and sexual components.

It is clear that the landscape of the desire for amputation has changed considerably during the last 6 or 7 years. Generally, the focus has shifted from apotemnophilia to BIID, and from the sexual motivation to the motivation of body identity. The similarities with GID are mentioned, but mainly neglected, notwithstanding the existence of an almost identical explanatory hypothesis of GID in terms of a tension or a mismatch between body image and physical body.

In this context, it is only a small step to a hypothesis in terms of a mismatch between the objective body and the body represented in the brain and to lose sight of the sexual component that is so often present in amputation desire. Based on First's survey (2004), for a large majority (63% or even up to 67%) sexual arousal is an important motivation for amputation, whereas Hilti and colleague (2010) give no percentage for the 'relatively uncontaminated' form of amputation desire. Moreover, percentages of other categories cannot be denied. The involvedness of sexuality is even more manifest when we look at the 87% that reported sexual attraction to (other) amputees (cf. First 2004). This prominent occurrence of sexual attraction to (other) amputees and its relation to apotemnophilia/BIID is discussed in the next section.

BIID and GID: re-acknowledgment of the sexual component?

It seems undeniable that non-delusional persons desiring amputation of a healthy limb look for a recovery of the correspondence between their objective body and their felt sense of bodily identity. This desire, however, is often accompanied by two other unusual interests or behaviours. First, most subjects with amputation desire are also devotees, i.e. acrotomophiles (cf. supra). Second, simulating or pretending to be an amputee gives them sexual pleasure. In sum, amputation desire, acrotomophilia and pretending largely co-occur in all large surveys (published in 1976, 1996 and 2004, see also note 4).

In 2006, an extensive comparison is made between GID, more specifically non-homosexual male-to-female (MtF) transsexualism[9] and desire for limb amputation (Lawrence 2006). Nearly all non-homosexual MtF transsexuals have a history of transvestic fetishism or sexual arousal with cross-dressing. The comparison showed a number of remarkable similarities between MtF transsexuals and subjects with amputation desire. Just like apotemnophiles, (both homosexual and non-homosexual) MtF transsexuals experience profound dissatisfaction with their bodies and want to surgically modify it in order to achieve a more acceptable body. The image of 'wrong embodiment' and of 'being trapped in the wrong body' is often used to describe the experience of both transsexuals and apotemnophiles. Second, the desired embodiment or state is nearly always simulated (cross-dressing; pretending to be an amputee).

[9] Homosexual male-to-female transsexualism includes persons who were overtly feminine as children and very feminine as adults and who are exclusively attracted to men. Non-homosexual male-to-female transsexualism includes persons who do not show these characteristics, and who may be sexually attracted to women, to women and men, or to neither sex (cf. Lawrence 2006 p. 265).

Parallels between non-homosexual (but not shared with homosexual) MtF transsexuals and apotemnophiles can be summarised as follows. First, there is no natural resemblance between the physical body and the desired embodiment.

Second, both categories present paraphilia-related characteristics, respectively sexual arousal by the thought or image of being a female and sexual arousal to the idea of being an amputee. Based on the survey of First (2004), Lawrence (2006) claims that "[T]his demonstrates that the desire for limb amputation is often associated with paraphilic sexual arousal and may sometimes be motivated by this arousal." (Lawrence 2006 p. 266). Accordingly, the ambition of Lawrence is to consider the desire for limb amputation as a direct outgrowth of paraphilic sexual attraction to the idea of being an amputee. In contrast to Bayne and colleague (2005), Lawrence argues for a fundamental connection between the sexual component and body identity in the desire for limb amputation. Although Bayne and colleague mention the similarity with GID (referring to First 2004), they do not go more deeply into the comparison, most probably because they believe that the sexual component is not essential in amputation desire. Another reason might be that First (2004) did not ask his participants about the relation between pretending to be an amputee and sexual arousal, but it was clear from the survey that the great majority was sexually aroused by the idea of being an amputee. This, together with the fact that almost all participants mention the relation between their desire and pretending, makes the assumption reasonable that pretending is sexually arousing as well.

A third parallel with non-homosexual MtF transsexuals is that they are sexually attracted to individuals with the body type they desire to acquire for themselves (respectively women and amputees). Fourth, both non-homosexual MtF transsexuals and wannabes claim that their sexual arousal is not related to the desire to change their body (and live as a woman resp. as an amputee), but is primarily related to expressing their true identity. Notice that for First (2004), the order of importance was the main reason for distinguishing BIID (not primarily sexually motivated) from apotemnophilia (primarily sexually motivated). In light of the above, the neat distinction between a desire for amputation relatively uncontaminated by sexual components and apotemnophilia seems questionable again.

Lawrence also offers a hypothesis that aims at explaining the connection between acrotomophilia, pretending and apotemnophilia. This hypothesis is briefly as follows. Apotemnophilia is a rare combination of an unusual erotic preference (acrotomophilia) and another paraphilia, namely 'erotic target location error' (cf. Freund and Blanchard 1993) on the basis of which this erotic preference is localised not (only) in others, but also, and

preferentially, in themselves (hence pretending and apotemnophilia). In short, it is a combination of an unusual erotic target (amputees), together with an erotic target location error (cf. Lawrence 2006 for details). This hypothesis is one way of explaining why sexual arousal is not said to be a primary motivation of the desire for amputation, since "feelings of attachment to the image of themselves as amputees, plausibly arising from earlier sexual arousal, might contribute substantially to the ostensibly 'nonsexual' motivations these individuals report." (Lawrence 2006, p. 274). Another possibility is that apotemnophiles deny the sexual motivation influenced by 'socially desirable responding'. None of the other publications mention these possible relations between sexual and nonsexual motivations for amputation desire.

The hypothesis by Lawrence (2006) opens up the complicated question of how body identity and sexual preferences are related. The previous sections already showed that an interpretation and understanding of the desire for amputation without taking into account the role of sexuality is problematic. The role sexuality plays in one's bodily existence and in the feeling of body identity remained largely unaddressed. How motivations of bodily identity and sexual motivations precisely relate, remained unclear. The relation between sexuality and body identity/body image therefore requires further investigation. In the following sections, a phenomenological frame is offered for such an investigation.

Merleau-Ponty's sexual schema

The phenomenologically inspired distinction between objective body and lived body figures centrally in the description of BIID. Also the concept of body image—playing an important role in possible explanations for amputation desire—is inspired by Merleau-Ponty's phenomenology of the body. In this section, another and much less discussed concept from Merleau-Ponty's phenomenology of the body is introduced, the 'sexual schema'. Merleau-Ponty's notion of sexual schema offers us a handle for approaching questions that appear on the horizon of the present discussion.

In his *Phenomenology of Perception* (1945a), Merleau-Ponty introduces the notion of 'sexual schema' in a discussion of affective life, i.e. that area of experience in which sexual desire plays a major role. Here, as in the domain of perception, motility, and intelligence, Merleau-Ponty resists two kinds of interpretations. On the one hand, he rejects an explanation of affectivity in terms of states of pleasure and pain, explicable only in terms of the bodily-biological system. On the other hand, he dismisses an interpretation in which pleasure and pain are replaced with mental representations. According to these interpretations, a sexual incapacity or a sexual disorder would amount respectively to a change in the capacity for sexual satisfaction or to a change in certain mental representations. According to Merleau-Ponty, however, there are no sexual reflexes and pure states of pleasure do not exist. Also, changed representations cannot be a cause, only a result of a change in sexual life itself.

Sexual life is to be situated *between* automatic bodily responses and mental representations, i.e. in a 'vital zone' where "[T]here must be an Eros or Libido which breathes life into an original world, gives sexual value or meaning to external stimuli and outlines for each subject the use he shall make of his objective body." (Merleau-Ponty 1945a, b, p. 180) Both the preference for a certain stimulus as a sexual one and a particular use of one's own body originate in this vital zone of Eros or Libido. It is here that Merleau-Ponty introduces (presupposing the context of male and normophilic heterosexuality) the 'sexual schema'. The sexual schema "(…) is strictly individual, emphasizing the erogenous areas, outlining a sexual physiognomy, and eliciting the gestures of the masculine body which is itself integrated into this emotional totality." (Merleau-Ponty 1945a, b, p. 180) Importantly, the sexual schema is not to be identified with the body image or the body schema, but seems to indicate a another dimension of the bodily subject. This dimension is erotic perception, considered as a perception distinct from ordinary (objectifying) intentionality. 'Intentionality' is the technical phenomenological term for subject-object, subject-world or (in the case of intersubjectivity) subject-subject relations. Central in the notion of 'intentionality' is that the subject actively relates to the intentional object, and this activity from the side of the subject is understood as 'constitutive', i.e. bringing about what it relates to. In the case of the sexual schema, what is constituted or brought about is an original, in this case sexual, world. The constitution of a sexual world, however, has implications for one's own body. Not only acquires the world sexual meanings, but one's own body also goes through an operation of constitution, which "outlines the use he shall make of his objective body." (Merleau-Ponty 1945a, b, p. 180).

The sexualised body and world are the terms of 'erotic perception' or even 'erotic comprehension'. Erotic comprehension is different from intellectual understanding in the sense that it does not subsume an experience under an idea, but rather functions 'blindly' (in a Kantian sense).[10] "(…) desire comprehends blindly by linking body to body"

[10] According to Kant, in the *Critique of Pure Reason* ([1781/1787] 1998), experience and knowledge are a result of subsuming the givens of intuition under the categories of the understanding. Without intuition, the understanding remains empty, but without the concepts of the understanding, intuition remains blind. Sexual and erotic perception is, according to Merleau-Ponty, blind in the latter sense. This blindness implies that sexual and erotic preferences cannot be objectified.

(Merleau-Ponty 1945a, b, p. 181). It is this blindness, i.e. this intellectually uncomprehended erotic and sexual comprehension, that can leave us stunned when it strikes ourselves, e.g. in the case of being suddenly sexually attracted to someone, but which also confronts us with a double form of incomprehension when its general directedness is not generally shared with others, as in the case of paraphilic preferences.

The sexual schema refers to one's sexual abilities, the sexual-erotic use one will make of his or her body, and one's sexually active stance in the world.[11] Merleau-Ponty is rather emphatic about this implicit but active nature of the sexual schema, in that "(…) sexuality, without being the object of any intended act of consciousness, can underlie and guide specified forms of my experience." (Merleau-Ponty 1945a, b, p. 196).

The sexual schema can be compared to a cognitive schema, in the sense that a cognitive schema refers to a consistency in the way individuals respond to similar patterns. In other words, a schema is a way of relating to the world and this relation is constitutive for what is related to (in perception or another kind of interaction). Schema's get activated when a particular stimulus relevant for that schema impinges on the subject (Becerra 2004, p. 5). The sexual schema is thus not a representation of, e.g., the preferred sexual object or stimulus, but it determines whether and how the object or stimulus is perceived or experienced (e.g. as sexually attractive or arousing).

Merleau-Ponty compares sexuality to a spreading odour or sound, and also to an atmosphere (Merleau-Ponty 1945a, b, p. 195 and p. 196). These metaphors point to two basic characteristics of the sexual schema. On the one hand, they indicate that the sexual schema is never the object of consciousness, i.e. never a mental representation (e.g., of the preferred sexual stimulus), but rather a particular and consistent *way of* perceiving or experiencing. Secondly, like an odour, sound or atmosphere, it cannot be pinpointed but is implicitly operative at every moment in adult life. Sexuality, according to Merleau-Ponty, is co-extensive with life.

Re-integrating the sexual component: libidinous life and existence

Sexual intentionality is distinct (and can be distinctly described), but it is not separate from the rest of existence. On the contrary, it is a kind of intentionality that follows the larger flow of our existence and yields to its movements. According to Merleau-Ponty, sexual intentionality is special because it does not function next to, but underlies perception, motility and representation, such that all perceptual, motor and representational processes are endowed with a certain degree of vitality. Sexual intentionality is thus in no way separate from other processes and does not operate autonomously. Libidinous life is therefore not a matter of instincts and of activities that would be directed towards definite ends. Sexual arousal is not tied to certain well-defined ends or objects. In contrast, Merleau-Ponty opens up—clearly inspired by psychoanalysis—the possibility of a generalised notion of sexuality as a manner of being.

But does such a broadening of sexuality not blur existence and sexuality, in the sense that all existence would have a sexual meaning, and that every sexual phenomenon would take on existential significance? Also, do certain examples not show us that sexuality is a separate function with a causality of its own, in the sense that we sometimes discover that sexuality and existence go their own way? Merleau-Ponty gives the example in which "an effective life, in the political and ideological field, for example, can be associated with impaired sexuality, and may even benefit from such impairment." (Merleau-Ponty 1945a, b, p. 184). What this and other examples show, however, is that sexuality and existence, although not separate, are not identical either.

In order to specify the relation between sexuality and existence, Merleau-Ponty reminds us of the peculiar relation between body and psyche, involved in a relationship of reciprocal expression. It is this relation of reciprocal expression that is characteristic of existence, and it means that bodily events always have a psychic meaning. At the same time, however, Merleau-Ponty distances himself from a psychoanalytic point of view in which the body is "the transparent integument of Spirit" (Merleau-Ponty 1945a, b, p. 185).

[11] Merleau-Ponty tries to elucidate the operation of the sexual schema by comparing it to the body schema. It is important to notice that body image and body schema differ in important respects. "The conceptual distinction between body image and body schema is related to the difference between having a perception of (or belief about) something and having a capacity to move (or an ability to do something). We can characterize the body image as involving perceptions, mental representations, beliefs, and attitudes where the intentional object of such perceptions, beliefs, etc. (that which they are directed towards or that which they are about) is one's own body. The body schema, in contrast, involves certain motor capacities, abilities, and habits that enable movement and the maintenance of posture. It continues to operate, and in many cases operates best, when the intentional object of perception is something other than one's own body." (Gallagher and Meltzoff 1996, p. 215).

The English version of *Phénoménologie de la Perception* translates 'schéma corporel' as 'body image', whereas the characteristics of the sexual schema resemble better those of the body schema than those of the body image. Moreover, and in spite of the Merleau-Ponty's lack of differentiation between body image and body schema, Merleau-Ponty explicitly refers to the context of movement and thus to the body schema when discussing the sexual schema (cf. *Phénoménologie de la Perception,* Paris: Gallimard, 1945a, p. 196).

Accordingly, for Merleau-Ponty, psychological treatment or cure can only be effective if it is not merely aiming at an awareness of cognitive nature, but at a change of existence—existence being the expressive unity of body and mind. Symptoms are not worked out on the level of objectifying consciousness, but on a deeper level, the level of existence, where mind and body stand in a relation of reciprocal expression.

If we now turn back to sexual life, sexuality has an existential significance because it expresses existence. This means two things. On the one hand, sexuality is not merely a symptom of existence, and cannot be reduced to it. On the other hand, existence cannot be reduced to the body or to sexuality, but both the body and sexuality surely are constitutive of existence. Sexuality permeates existence and vice versa. For whom exists, there never is mere sexual significance, but sexual significance assumes a more general significance. Merleau-Ponty calls this operation of existence 'transcendence', i.e. the act in which existence takes up a situation and transforms it. Because of the particular relation between sexuality and existence, searching for or presupposing the existence of purely sexual motivations, i.e. without taking into account the operation of existence that transforms the sexual into something existential, is at least problematic.

Conclusion: taking the interaction between body image and sexual schema into account

Merleau-Ponty's notion of sexual schema can prove useful in further discussions of amputation desire, even for a broader category of subjects than those who have a sexual motivation as primary or secondary motivation. In First's survey, of the male subjects, 72% reported feeling sexually excited when thinking of himself as an amputee (among the four women, only one subject reported being sexually aroused) (cf. First 2004). We should also take into account that 87% reported sexual attraction to amputees. Moreover, 92% answered that the preoccupation started by their pretending to be an amputee (cf. First 2004) and we know that pretending and sexual arousal tend to co-occur (cf. Lawrence 2006). The occurrence of a sexual component clearly extends beyond the presence of sexual motivations as focused on in the surveys.

This is not surprising in light of Merleau-Ponty's claim that sexuality and existence permeate each other, for this implies that sexuality and our sexual preferences are an essential component of what and who we are. It is moreover understandable that sexual intentionality partly loses its implicit character and comes to stand out for subjects having an amputation desire. Both in normophilic and in paraphilic orientations, sexuality is a central component of one's identity. Sexual preference seems to be something we do not choose, but something that slowly or sometimes even abruptly manifests itself to us. Because of this, sexual preference feels as deeply rooted in what and who we are. But as Persons adds: "To the extent that an individual's sex print [experienced as sexual preference] 'deviates' from the culture's prescription for sexuality, it may be experienced as even more central to identity (at least in this culture)." (Persons 1980, p. 620) This would imply that normophilic subjects, i.e. subjects whose sexual preferences match with the culturally and socially accepted preferences, would not experience their sexual preferences as so critically essential to their identity, whereas people attracted to amputees and/or having an amputation desire, find themselves confronted with a unusual sexual intentionality operative at the heart of what and who they are.

Instead of merely focussing on the relation between body image/represented body and objective body, it has to be investigated into more detail how the sexual schema of a

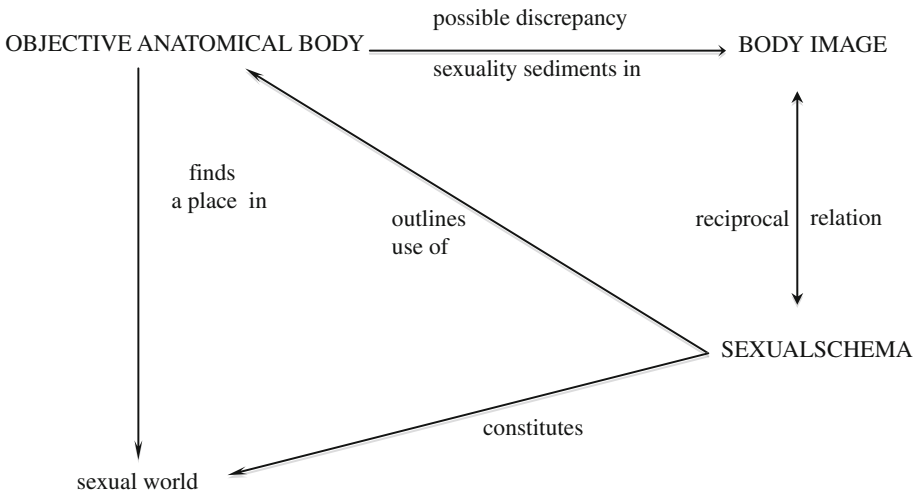

Fig. 1 Interaction of anatomical body, body image and sexual schema

subject with amputation desire influences one's body image such that a wish for amputation can arise. The diagram below (Fig. 1) represents how anatomical body, body image and sexual schema may interact, and thus how the sexual schema is a third, underlying element in the interaction between objective body and body image. The upper half of the diagram functions explicitly, whereas the lower half of the diagram is usually a matter of implicit operation.

The sexual schema is responsible for the constitution of a sexual world, in which items receive sexual meaning (sexual intentionality), but also outlines the sexual use one will make of his objective body, such that one's body can find a place in the world of sexuality and the subject is capable of having a sexual life. This situation and the changes occurring in it, inevitably lead to changes in one's body image, i.e. in the explicit perception and beliefs one has of his/her own body. The growing recognition of multiple body representations (Schwoebel and Coslett 2005) supports the phenomenological idea that the body is not a monolithic given. However, the plurality of the body does not imply that different bodily dimensions stand in a hierarchical and static organisation of implicit and explicit levels. Explicit and implicit bodily dimensions are rather governed by two-way interactions. Body image and body schema, for example, are not hierarchically arranged, but stand in a relation of mutual influence between what is implicit and what is explicit (cf. Rossetti et al. 2005). These findings make it likely that body image and sexual schema also stand in a reciprocal relation, making the diagram more complex, but also more dynamical.

It are these complex and dynamical interactions between sexual schema, objective body and body image that stand out in the case of paraphilic preferences with fetisjist behaviour. A hypothesis like the one by Lawrence easily fits this phenomenological conceptualisation. Whereas the erotic preference of the acrotomophile could be considered a matter of the implicitly operating sexual schema, the intimately connected 'erotic target location error' (apotemnophilia) could be considered a matter of the more explicit body image. The way both interrelate is a matter of speculation, but it might be that the first exposure to an amputee leads to a rather dramatic explication of the sexual schema into the body image, and accordingly influences the sexual dimension of one's own body image in terms of an amputated body.

However that may be, the implicit nature of the sexual schema and the explicit nature of the body image may explain why subjects emphasise body identity/body image motivations, rather than sexual schematic related issues.

Whatever the exact relation between the sexual schema and one's body image is in the case of subjects with a desire for amputation, more attention for the involvedness of the sexual schema in one's bodily identity and body image could help clarifying this unusual condition, but it could also proof useful in further studies of multiple body representations and their relation. Moreover, the perspective offered here might be useful in discussions of medical decision making in the case of BIID. The general tendency in the literature is that the self-demand for amputation in cases of BIID should be respected (e.g. Bayne and Levy 2005). This standpoint assumes that BIID as a condition can be distinguished from other conditions, e.g. from apotemnophilia, in which case such a demand would be deemed less justified. Patrone (2011), however, remarks that it is difficult to distinguish in practice BIID-motivated request from non-BIID-motivated requests for amputation. We have explained why it is difficult to isolate sexual and non-sexual motivations, and how a desire to change one's physical body according to one's body image cannot be judged without taking into account a broader perspective on the patient's affective life, in which body image and sexual schema operate in a reciprocal, dynamical way.

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