

Denied and false pregnancies: Opposite settings of a single evolutionary conflict

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Abstract:

Aim: A woman in denial of pregnancy is pregnant but remains unaware of her gravid state. In the case of a false pregnancy; the woman is not pregnant but believes she is and presents signs and symptoms of pregnancy. These syndromes correspond to opposite contradictions that were mainly explored separately. Our aim is to explain them by a common and consistent etiology.

Method: We explore internal conflicts inherited from the evolutionary transition from solitary animals to social species.

Results: The solitary and social characters are contradictory. They induce internal conflicts intrinsic to the human condition. At the reproduction level, those conflicts oppose primitive interests (genes transmission) to social identity ones (to become a parent). Both syndromes are described by powerful identity interests in contradiction with the actual physiological state: *i*) actual pregnancy but unacceptable motherhood (denial), and *ii*) imperative motherhood in a non-pregnant woman (false pregnancy). The physiological symptoms results from a temporarily adaptive artifice hiding the internal tension and fulfilling simultaneously (but superficially) the incompatible demands.

Conclusion: The proposed model explains clinical observations satisfactorily. It complies with a huge diversity of causative events for the identity tensions involved as reported in literature. The model also elucidates the temporary adaptive character of those psychosomatic dysfunctions. To explain those syndromes in a rational and understandable way will facilitate health professional information, thus favoring the detection and follow-up of cases. The acceptance of their condition by concerned women will also be made easier.

Keywords: Denial of pregnancy, false pregnancy, gene transmission, to become a parent, evolution, solitary-social conflict, *standby-in-tension* response, etiology.

As a dysfunction, denial of pregnancy (DP) is as mysterious as astonishing. It happens that a woman life course is deeply transformed by a totally unexpected delivery (with a rate of about 1/2500 births following Wessel¹). Stories are numerous and striking. For instance a young and slim woman arrives to the emergency unit complaining of abdominal pain and delivers a 3kg newborn. One week earlier, she was on a naturist beach and no one of accompanying people did notice her pregnancy².

Such a scenario is only possible thanks to a deep transformation of the physiological course of the gestation. The fetus lays vertically, to the detriment of the diaphragm and other internal organs, rather than horizontally as in a normal pregnancy³. The other symptoms associated with a gravid state may also be significantly reduced or absent. In Brezinka study⁴, none of the 11 women who experienced an unexpected delivery did present nausea symptoms that affect normally from 50% to 80% of pregnant women. Regular bleedings appraised as periods are also reported in numerous cases. Even fetus movements can be unnoticed or associated to gastric disturbances.

It happens however than those pregnancy signs are present but insufficiently considered or attributed to wrong causes (stress or excessive food for weight gain, irregular bleedings for amenorrhea, etc.).

Another astonishing aspect of DP deals with the transformation triggered by denial disclosure. If a woman in denial of a 6, 7 or 8 months pregnancy becomes aware of her gravid state after an ultrasound examination by a physician, she usually experiments sudden bodily transformations to present the normal silhouette of pregnant woman at the same advancement state within a few hours or days. Among others, the case of Sherifa Luna is particularly demonstrative³. When she won a reality-show TV program, that young woman danced and song without her 6 months pregnancy being noticeable. Her gravid state was revealed a few days later by an ultrasound examination. She then perceived for the first the fetus movements during the following night. Among the 18kg she put on before delivery, 6 appeared during the week following the announcement, her silhouette having been transformed in a few hours only.

These stunning transformations demonstrate the body ability to function normally since the pregnancy announcement is sufficient to trigger spontaneous recovery. As deduced by Sandoz, DP is therefore a *software* dysfunction rather than a *hardware* one³.

False pregnancy (FP) or pseudocyesis is defined by the DSM5: *a false belief of being pregnant that is associated with objective signs and reported symptoms of pregnancy, which may include abdominal enlargement, reduced menstrual flow, amenorrhea, subjective sensation of fetal movement, nausea, breast engorgement and secretions, and labor pains at the expected date of delivery*. A study in a rural zone of South-East Nigeria shows a rate of 1 FP every 344 births⁷ whereas still higher rates were observed by other studies, in the US included⁸. One study states however a rate of only 1/22000⁸. This variability results partly from cultural factors, from access to diagnosis possibilities and from inclusion criteria⁹.

FP involves also changes in the organism functioning to serve the artifice and produce normal pregnancy symptoms, notably through the activation of very-low level physiological processes^{8,10}. For FP also the body is able to function normally – without pregnancy signs – as demonstrated by the express symptom disappearing, for instance after a negative ultrasound examination. This second dysfunction is therefore also *software-caused*.

Even if the analogy between these two dysfunctions is known^{4,11,12,13}, they were studied separately and attributed to psychological causes¹³. Del Giudice did however notice the insufficiencies of psychological explanations of DP¹⁴. He first rooted DP in evolutionary biology and attempted an explanation in the form of three hypotheses. Sandoz went one step further by combining psychological and evolutionary aspects within a systemic approach¹⁵. We continue this etiological research here by explaining DP and FP as two opposite settings of a single evolutionary conflict.

Method

The human species is a recent product of evolution and thus counts numerous, more or less distant ancestors. We focus here on the transition from *solitary animals* to *social species* to make evident that the contradictory nature of solitary and social characters results in conflicts.

A solitary animal (reptiles, amphibians) does not depend on his fellows. For it, the universe is made of a duet: itself and the environment. It does not take care of its offspring that are autonomous at birth. If egg fecundation requires copulation, the sexual partner exists as a rewarding element of the environment, alike excellent food; there is a difference in function but not in status.

Solitary animals are equipped with a small-sized central nervous system that is sufficient to monitor their metabolism and their interactions with environment. Their behavior is driven by species perpetuation requirements through primitive instincts regarding survival, reproduction and well-being that favor gene transmission to the next generations.

The inheritance from solitary animals is essential to the human being since at the levels of cells, tissues and certain organism systems, numerous elementary processes were already acquired at this evolutionary stage. This statement suggests that human physiology as well as its dysfunctions are rooted in this major evolutionary stage.

The case of human beings is very different since we are intrinsically interdependent on each other. Contrarily to lizard babies, the survival of a human infant requires fellow's assistance for several years. Between a sexual partner and delicious food, the difference concerns both the function and the status. The universe is not reduced to a duet: the individual and the environment, but at least to a trio: the individual, fellows and the environment. The individual is concerned by his fellows, especially those with who he shares genes, first and foremost his descendants.

The human infant builds his social identity progressively, notably by learning, as a function of his actual social experiences and of reference values with which he grows up. He thus elaborates a personalized set of subjective representations of his rights and duties toward himself and others. The image that he has from himself exceeds significantly his own organism to include all what he is – or internally thinks he is – as a human person.

In accordance with those specificities of his social status, the development of the human brain lasts long beyond birth under the sociocultural influence of surrounding people. We may note that the *social brain* hypothesis attributes the large human brain size to our extraordinary social capabilities. Contrarily to solitary animals, the human behavior is not only driven by primitive needs of the organism but integrates more sophisticated needs of the person. This distinction is somewhat analogous to that between the concepts of *genes* and *memes* introduced by Dawkins¹⁷.

Being distant descendants of solitary animals, human beings combine both the solitary and social characters that are intrinsically antagonistic. We are indeed interdependent people

hosted by physically independent organisms. The resulting solitary-social duality is intrinsic to the human condition. It is a source of internal conflicts; especially psychosomatic ones since a significant part of human metabolism was inherited from the solitary-animal evolutionary-stage whereas the human mind is a specific product of the social evolutionary stage. The body-mind interactions play therefore a major role in the monitoring of these internal conflicts and the ability of the human brain to deal best with them was optimized by natural selection across human evolution. Natural selection applies however to populations over long time scales. At the level of the life course of a single individual, solitary – social conflicts may lead to maladaptive responses and induce dysfunctions. This etiological approach remains barely explored in psychosomatics; we apply it here to the cases of DP and FP.

Results

Theoretical Aspects:

By focusing specifically on the issue of human reproduction, the solitary and social aspects distinguish easily. The species perpetuation forces (solitary) pressures the individual to transmit his genes to one or several descendants whereas, at the social level, to give birth changes the person's status to a parent status (for both the father and the mother, for the first or one more time). This identity change meets the concept of psychic gestation¹⁸ but extends it beyond the mother-child relationship.

From the subjective perspective of the future parent identity, to become a parent presents from our point of view two major consequences: *i*) to acknowledge active sexuality and *ii*) to shoulder parenting. In a person who presents traumatic remnants related to these points (sexual trauma, illegitimate sexuality, familial violence, abandonment, immaturity feelings, ...) the psychic transition toward the status of parent may be impossible without reducing the procreative instinct. In such circumstances, a possible pregnancy would be conflicting; required the instinct but unacceptable to the social identity. As long as the psyche remains unable to solve the conflict, DP provide a temporary *standby-in-tension* outcome satisfying artificially the two incompatible demands. The incompatibility between the solitary and social demands is then compensated by a psychic tension that increases with fetus development to culminate at the time of an unexpected delivery if denial is not disclosed before.

The transitory state of sideration and/or dissociation frequently reported at the time of such unexpected deliveries would thus result from the sudden release of this internal tension when denial is disclosed by the evidence of the newborn.

The case of FP corresponds to the opposite configuration; *i.e.* an inhibited procreative instinct that enters into conflict with an imperious need to become a parent. At a primitive development stage, the procreative instinct expresses spontaneously in adults when environmental conditions allow it, especially in terms of safety and food resources. Transposed to the human species and outside physiological infertility, the psychic inhibition of the procreative instinct suggests that, as subjectively appraised, current life conditions are insufficient, notably physically or materially. (Actual facts may contradict such internal appraisals). At this point again, such appraisals cover a huge diversity of causative events depending on individuals and thus comply with the specificity of each life course. In such a configuration in which an actual pregnancy is blocked, a FP allows temporarily the release of the psychic tension raised by the parenthood demand.

In both syndromes, the psychic tension raised by the solitary-social conflict would constitute the software cause of the misleading physiological symptoms observed. The latter would thus result from a process analogous to a conversion syndrome via the recruiting of numerous physiological processes^{8,10,19}.

Table 1 summarizes the pregnancy possibilities as a function of the inhibited or active state of the solitary and social levels respectively. No dysfunction is observed when states are consistent with each other. At contrary, the conflict resulting from their mismatch creates conditions for a pathological pregnancy; denied or false. The figure 1 presents graphically those opposite syndromes. It shows notably the psychic tension necessary to compensate for the solitary – social mismatch. In both syndromes, the resolution of the conflict due to the acknowledgement of the actual physiological state triggers the adjustment of the solitary and social levels and therefore the sudden release of the compensatory psychic tension. Then the fake symptoms – lack of pregnancy signs for DP or actual pregnancy signs for FP – lose their cause and disappear spontaneously.

For FP, Ouj's study reports sociocultural elements that support our model: *The traditional African society places invaluable premium on procreation. In the Igbo culture of southeast Nigeria, marriage is valued and sacred. Being married is the dream of a majority of African women. Pregnancy and childbirth not only confirm womanhood but also secure the woman's place in her husband's family. Pregnancy is pride, joy and security. However such security can become threatened in the face of unexpected secondary infertility or in some*

cases lack of a male offspring in the largely patrilineal Igbo society (p 660). And later: Misconceptions and erroneous beliefs place the burden of infertility solely on women in most African settings. Misinterpretations and falsehoods underlie the etiology of infertility in Africa as the woman's past 'indecent' lifestyle is held responsible. She is stigmatized (p 660). These sociocultural observations provide explicative elements for either the social necessity to become a mother or the insecurity of these women in their husband's family; both aspects being pro-FP conditions following our model.

Our explanations of FP comply also with the psychological causes listed in the review paper by Kenner and Nicolson¹³: to save a weak marriage, to express womanhood, to gain a partner, to punish oneself, to secure affection, to avoid abandonment or to defend against various losses or separations. In our approach, this list of possible causes, but neither necessary nor sufficient, stands as as many personalized causes of a single fact: an imperative need to become a parent. Similarly for DP, diverse individual experiences may produce the opposite result: to make parenthood psychically unacceptable.

Clinical aspects:

The model proposed in this paper; *i.e.* an internal conflict between to transmit one's genes by giving birth and to become a parent, applies successfully to the cases reported in literature. We test it below with the three cases of DP until an unexpected delivery reported by Finnegan⁵.

Miss A was the third oldest of ten children raised in the prairies by strict parents. Her father was a preacher and the town mayor. Her mother had a history of precipitous deliveries and a silent fourth pregnancy ending in neonatal death. As a child Miss A was teased for being fat and felt "pressured to be perfect". Religious attitudes in the home precluded contact with physicians or the discussion of sexuality. On one occasion, when she observed her parents arguing about contraception with a social worker, she feared being sent away for adoption. She remained at church until she became sexually-active at the age 22 (p.672). Such a familial context is unlikely to strengthen the young woman abilities to acknowledge active sexuality and to look forward motherhood positively.

Miss B was an overweight, 39 years old single woman... of limited intelligence. She was an illegitimate child whose father had died in a car accident shortly before her birth (p.672-3). These life events are again unlikely to allow a guilt-free acknowledgement of sexuality or a positive consideration of motherhood.

Miss C was a 20 years old single Italian woman living in Canada for 1 year. *She was living with her sister, her brother-in-law and their three young children. She rarely left the sister's house except to go to church and occasionally to accompany her sister on visits to other Italian families. In response to the doctor's statement that the patient was in labour, the accompanying Italian woman who acted as a translator first replied "that's impossible she is not married". The patient responded "that's ridiculous, I'm not pregnant" (p. 673).*

The lack of independence and the immaturity of that young woman as well as her sociocultural environment are again unlikely to allow a positive motherhood outside of wedlock's.

Of course these observations do not provide evidence but they support the proposed model as commented by Finnegan in his paper discussion⁵: *Miss A recalled fears of being abandoned by her parents by being given up for adoption. Her parents' inhibited approach towards sexuality possibly left her with a poor sense of herself as a woman and potential mother. Miss B had lost both her parents many years prior to her pregnancies. Far from being able to care for a child, she seemed barely able to care for herself, living a life of unemployment, reliance on welfare and excessive drinking. Miss C, far away from her parents, seemed more like a dependent child herself rather than a woman able to accept the mothering role. (p.673)*

Discussion

Our understanding of DP and FP is made difficult because they necessary fail at the end. Zagury uses the concept of denial of ineluctability of the pregnancy term²⁰. Another hypothesis suggests that those dysfunctions involve archaic mechanisms set at a reflex level where the notion of time is not taken into account in regard to the instantaneous tension currently perceived³.

In DP cases that end up with the birth of a viable newborn, our description would suggest that most babies are left to the foster care system since this possibility fulfils perfectly the supposed inability to become a parent. Actual facts are different as shown by Beier's study¹². Among 65 viable babies of their obstetric cases, 51 were kept by their parents, 1 with other family members and only 13 were left for adoption. This contradictory observation does not infirm our model. Rather, it shows the irrational character of the initial psychic causes that vanishes in front of actuality.

In most part of our paper, we used intentionally the expression *to become a parent* rather than *to become a mother*. The solitary – social locks discussed here are indeed not specific to women even if the human reproductive system is highly gender-dependent. Men are also exposed to such conflicts; the latter producing however very different effects even if rare FP cases were reported in psychically disturbed men¹⁰. Instead of triggering strange physiological symptoms in a man, a configuration analogous to DP may contribute to explain behaviors of sexual violence or of abandonment of a pregnant partner since they satisfy the conflicting need to transmit one's genes without becoming a father.

Conclusion

To our knowledge, the model presented in this paper is the only one that is fully compatible with the diversity of reported clinical observations. It presents the advantage to explain the contradictory causes claimed in literature^{13,15} by considering them as as many traumatic events that may induce a single effect: to prohibit parenthood for DP and to make parenthood imperative in FP.

To have such a rational and understandable explanation of these women dysfunctions is clinically useful. The information of health professionals will be made easier, thus favoring knowledge about those syndromes and their early detection. For concerned patients, the ability to relate their so mysterious experience to a rational mechanism may help them to accept their condition and to minimize possible guilt. Furthermore, therapeutic follow-ups directed toward a well-defined generic cause may help in the elucidation of the personalized causes in each patient and thus gain in efficiency, especially in regard to the risk for recidivism⁹.

Finally, we note the similarity between the explanations provided in this paper and past works that, from our point of view, were not sufficiently explored. We may cite the concept of inhibition of action introduced by Henri Laborit²¹, Gregory Bateson's double-bind concept used to study schizophrenia²² and the concept of disease of adaptation introduced by Hans Selye²³. Anyway these women dysfunctions reveals the power of the psyche to control metabolism and their exhaustive understanding would probably serve the etiology of other psychosomatic diseases.

The application of this evolutionary conflict approach to the general case of stress-caused diseases is presented elsewhere²⁴.

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		Social level – to become a parent	
		YES	NO
Solitary level – to transmit one's genes	YES	Normal pregnancy	Denial of pregnancy
	NO	False pregnancy	No pregnancy

Table 1: Allowed pregnancy type as a function of the status of the solitary and social levels (to transmit genes versus to become a parent).

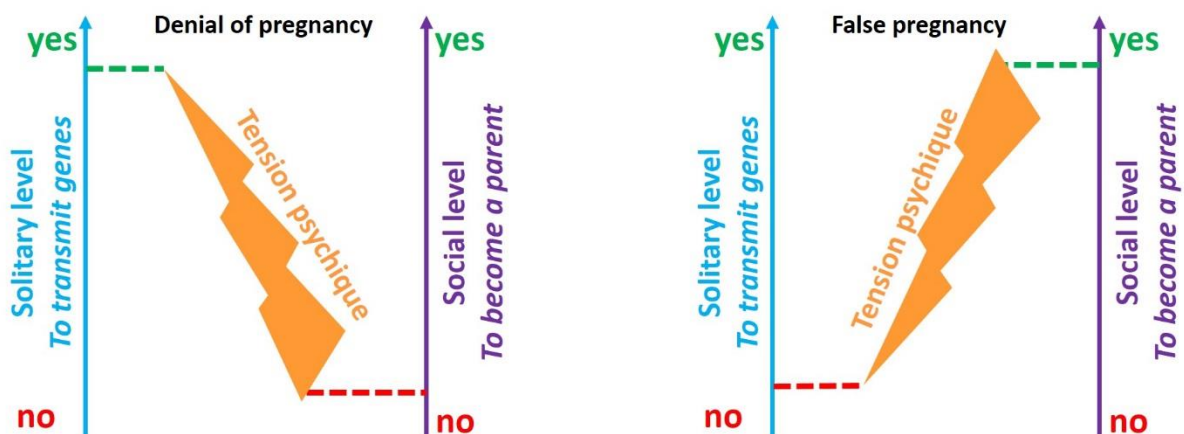


Figure 1: Solitary – social conflict and psychic compensation. Left) Denial of pregnancy: the psychic tension represses an actual pregnancy. Right) False pregnancy: the psychic tension fakes an imperative but nonexistent pregnancy.

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