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Anthropological reflections on the interventions on genitalia

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1) Introduction

For an anthropologist it is extremely interesting to reflect upon the "trafficking" on genitalia carried out both on males and females in different parts of the world. For a researcher who takes the global as subject and decides to participate in effort for social transformation, in fact, it is fundamental to work in concert with people involved in "opposition", both from the local to the global level (Bruce, 2000; Johnston, 2010; Susser, 2010). Her/his contribution could help them to produce more useful and effective outcomes. But there are some problems. In general, social activists show a noteworthy uniformity of tones, many times hostile to science, or better, they dislike some of the uses science is put by the political and economic forces controlling our societies, especially when masses are manipulated through the technologies of popular culture. The fact is that science and technology can be understood only at a reasonable deep level, in order to develop a seat-of-the-pant ability to track disputes regarding science and public policy. Science is practice (requiring convention and arbitrariness) and not only knowledge. Science needs years of education and training, and this is not compatible with the education styles of humanists and common people. As a result, most of the scientists are, as humanists, self-taught; while many humanists are, as scientists, autodidacts. This because Snow's idea (1961) on the "two cultures" is still working in our advanced societies, and some authors think that the gap will be covered in a century, even if new scientific branches useful to fill up the caesura are emerging (Damasio et al., 2001). Unfortunately science, the best tool that was developed to cope with "reality", is damaged by the so called "assertive way of thinking". This because, according to philosopher Agamben (Marcoaldi, 2011) in Western culture two experiential models regarding the use of words are constantly at work. The first model is "assertive". In short, when it is said that: "bodies fall under the law of gravity", this proposition can be verified, can be true or false. It can be proved through an adjustment between words and facts, but the subject pronouncing the statement is indifferent to the outcomes. Notwithstanding, another wider sphere is at work (and we tend to forget it). This is the ambit in which a net separation between true and false does not exist. This is the sphere of order, promise, prayer, entreaty, that are other ways in which the world is experienced: religion and law are based on it. Here the truth's value cannot be separated from the personal involvement of the speaker. It happened during centuries that the assertive model, so awe-inspiring, practically canceled other models and became predominant in science (and religions). The paradigmatic example is a debate between believers and non-believers: in most cases, during the discussions, there are none so deaf as those that will not hear. Both sides turn a deaf ear, as both of them are starting from assertive propositions: scientists and those who are religious have in mind the same model of truth, even if from opposite sides and different purposes. Assertiveness doesn't help science, and reinforces the anti-scientism of many academics that many times rely on the attitudes transcribed by "postmodern" authors like Derrida, Foucault, Lyotard, Baudrillard *et alii* that are, if not misinterpreted, for sure misused. There are phenomena such as the interventions on genitalia (IG) in which the interplay between environment, cultural and social factors is

high, therefore to unravel it require patience, subtlety, erudition and some knowledge of human nature are requested. IG are driven by culture, economics, aesthetics and politics, and the thorny anthropologists' role is to shed some light in this matter. Not an easy task: from one side cultural and social anthropologists are more able to surf in the complex net of social circumstances, political opinion, economic incentive, and the ideological climate propounding solutions; while, on the other side, biological anthropologists tend to be more reductive. The dominant thinking way about science on the part of nonscientists (including many activists) have a proclivity for anthropologically-based explanations belonging to social science and not to "hard sciences" for two reasons: the latter are interpreted as being assertive and because scientists explain *what* science knows and not *how* science knows. Another consideration regards both non biological anthropologists and the psychologists: They generally presuppose the reality and causal powers of mental states and their ideational content. They are not able to expunge folk psychology (also mentioned as commonsense psychology, or the natural ability to explain and sometimes predict mental states and behaviours of other people) from their scientific work (Boonzaier et al., 2005). For these reasons many activists find themselves more comfortable with humanities and social sciences and sometimes they prefer to declare themselves awestruck than to acquire the knowledge that can dissipate the awe. The fact is that to better understand IG a *pandisciplinary* approach is perhaps necessary in order to reduce/ban their impact. Pandisciplinarity "collects the tools, methods, and traditions of many different disciplines and applies them to the study of a new field" (Tritton, 2001, page 269) and this is the framework enclosing the considerations that will follow.

The reflections presented here proceed a survey recently carried out among the Venda ethnic group of South Africa, a composite group gradually welded into a whole, linguistically belonging to the Bantu-speaking family, plus other studies undertaken in the past (Viviani et al., 2006; 2007; 2008a,b; 2010). In this group interventions on female genitalia (IFG) are quickly disappearing (in one generations or two), while those on male (IMG) are still strongly carried out. This findings motivated the search the reasons (Dioniso & Viviani, 2013a,b). These reflections, a corollary of the previous survey, regard one fundamental aspect: how valid and successful are the attempts to ban or to reduce the impact of IFG and IMG carried out around the globe at different levels and with different results ? It must be stressed that in this context terms more or less politically correct such as mutilation, cutting and so on, will be substituted by the more neutral term *modification*. Because of some cogent reasons: first of all because IGF and IGM will be considered together inside the IG's frame for what they have in common, secondly because not all the interventions (IG) are bloody. For women they may include incisions, ablations, the stitching up of the *labia*, the ritual breaking of the hymen; but also modification of the diameter of the vagina, or the use of baths and smoking, or the application or ingestion of preparations useful to change the consistency, the lubrication and the humidity of the vagina, the latter are not real mutilations. IMG produce bleeding, but with different levels of seriousness: male circumcision (MC) can require the partial or *in toto* cutting of the prepuce, but also the complete skinning of the penis, sometimes of the scrotum as well (called the *salkh* in Arabia); and finally the breaking of the urethra, creating an opening reminding the female vagina (the *subincision* of some Australian natives). Obviously, the gravity of the intervention is connected to the type of IG. Thirdly, in many cultures a mutilation is in general considered as being disqualifying (e.g.: the one-eyed, the cripple, the single handed) (Posener et al., 1959). No one infibulated woman, in fact, considers herself her as being mutilated and few male circumcised Americans consider themselves as such, even if more or less consciously they could feel that they have lost something when facing intact peers. Clearly, for the Western culture every unnecessary intervention on the body requiring the removal of a part of it *is* a mutilation, but it is necessary to state that in most cultures some forms of maiming,
scarification, burning, flagellation, tattooing, wheeling, disfigurements, hamstrings and so on, have a

counter-initiatory value: it is necessary to lose or modify a part of the body in order to achieve higher social states (López Portillo, 1977). Neither the issue of developing a clear definition on genital mutilation is raised here (for details see: Bagnol and Mariano, 2008). Not even some other aspects are considered, such as the multitude of misconceptions, stereotypes and clichés connected to IFG and IGM, and all the subtleties found worldwide associated to personal hygiene, health and well-being, socialization and the desire of fertility, being these the results of a learning process strictly connected to what is incorporated inside a specific culture, taking into account that the cosmological and social landscape of every culture is always far from monolithic. Therefore an "holistic and generalized" approach appears to be the best way to reach insights on the variegated world of IFG and IMG and their proscription, as can be inferred from Gruenbaum's work (2005).

To reach more fruitful and rational insights, both IFG and IMG were firstly (and roughly) summarized in this way: for females they were subdivided into *reductive* and *expansive* forms, intending with the first all those operations requiring parts of genitalia removal (e.g.: clitoridectomy and infibulation), and with the former the interventions aiming to modify the genitalia magnifying their aspect (e.g.: *labia minora* elongation). For males, MC was subdivided into four categories: *therapeutic* (e.g.: to cure phimosis), *prophylactic* (the current form carried out in the States, sometimes graciously called *cosmetic*), *ethnic* (those carried out for initiation and religious purposes) and *other forms* (such as those carried out in South Korea copying the American style of life following the Korean War in the early 1950s). Then, as both genders were considered, the traits eventually in common were checked, taking into account the dualism male/female and the symbolic meanings associated to the genitalia and their modifications, that most of the times appear to be a sort of sacrifice. A sacrifice, in fact, is connected to the idea of exchange, on the level of the creative or spiritual energy: the more precious is the material object offered, the more powerful will be the spiritual energy received in exchange. As a tangible good symbolizes a spiritual good, the offering of the former provides as gift the latter as rewarding (Baruk, 1965). Thanks to the "sacrifice" of an important human part (because of its generative power) the gender identity is assured and reinforced: with the manipulation these parts of the body, it is impressed in the mind the perception that both the male and female identities are produced and maintained (Pasquinelli, 2007).

2) Some unresolved problems

Many hypotheses have been propounded during time about the origins of IFG and IMG, belonging to the different background and aims of the various observers. MC, for example, given the number of cave paintings and sculptures showing circumcised penises, is dated back to the Paleolithic period (Augulo e García-Diez, 2009) and its widespread presence in several parts of the globe (Africa, Australasia, Polynesia/Melanesia, some parts of Asia and Central and South America) let some students even think that: "It is probably not stretching the evidence too much to suggest that modern man evolved as a circumcising species" (Cox and Morris, 2012, page 244). In general, however, anthropologists do not agree on its origin (Zwang, 1976; Waszak, 1978; Dunsmuir and Gordon, 1999; Meijer and Butzelaar, 2000; Doyle, 2005; Glick, 2005; Pasquinelli, 2007). They are more interested in understanding if these practices are manifestations of cultural requirements, such as initiation, sacrifice, sexual benefits, tribal mark, hygiene or expressions of unconscious drive, such as envy, regression, castration complex, and so on. Modern anthropological theories of MC assume that a number of combined factors converged to establish it in different populations. It is possible, for example, that the first steps were taken in some primordial groups, to adequately cope with the environment. Later on, as the practice proved to be effective and functional, symbolic meanings were added (of course this assumption can be reversed). Historically it happened that some groups imitated neighboring populations as it happened for the Venda group. So, regarding the origin of every form of MC, the surrounding environments - both geographical and social - should be taken into account. In this optic, many theories become plausible. For instance, that of Weiss (1966) proposed for the

Nile Valley, according to whom the practice was introduced to prevent Schistosomial infection, common in the area. Or to eliminate difficult foreskins (Beidelmann, reported in Oening and Schmid, 2003, page 357). This theory could be plausible, as the foreskin in males differs from population to population, and dissimilarities exist individually, as each male is carrier of a combination of foreskin conditions. In South East Asians, for example, the foreskin tends to be shorter; while in other small groups genetic drift could have selected subjects having longer foreskins, and this created problems, ranging from irritation to others related to urination and during penetration. So the solution was practical: a sharp knife. This could explain while inside the same population the practice can be find or not: in Sudan, as an instance, the western Dinka circumcise, while the eastern Dinka do not (Eliade, 1987). It could also have happened that in hunting populations the need to get as much as possible closer to the prey without being identified because of the body odor, included actions such us covering the most scenting body parts with clay, and MC could have played a part in these maneuvers. It is possible that, when the intervention resulted to be functional, other meanings were added, connected to the set of symbols assigned to the body and the sexual organs. However, not all the anthropologists agree with these hypotheses. In cultural anthropology and in social and behavioural science it was introduced the distinction between *emic* and *ethic* (Harris, 1976). The former term describes the structure of a particular culture in terms of its internal elements and their functioning, rather than in terms of any existing external scheme. Any actor from a person within a specific culture can provide an emic account. Emic investigations can furnish insights on how a culture is central in determining how individuals act. Conversely, an observer furnishes an ethic account that attempts to be "culturally neutral", as the studied aspect can be differently valued in the various cultures of the world. To better understand a cultural fact a mix of the two approaches is requested to field students, in order to avoid to add all-encompassing values to a single culture (emic account) and to thwart observers of a single culture from seeing an aspect and to employ it to other cultures, making generalizations (this is a pitfall in which many physical anthropologists bump into). Vardanyan (2011), for example, carried out a study on Armenians using the two approaches and found that Eastern Armenians perceived MC as a legacy from their past, because of the Muslim influence; while Western Armenians accepted MC for medical reasons. This finding changed some ideas about Armenians and MC. These kind of efforts are necessary to avoid naïve realism, or the credence that everyone else defines the world in the same way we do. Other problems emerge. The scientific discourse of MC is laden with cultural and religious bias and this creates ethical and moral dilemmas. In the past, in the early development of anthropology, researchers focused on maintaining distance between themselves and the people they studied in order to be "objective." As anthropology evolved, researchers began to acknowledge that they could never truly be objective and began to practice reflexivity in their work. Ethical guidelines in anthropology have evolved over time and nowadays anthropologists have no fear in intervening in some contexts. And most of the violence hold onto IG requires intervention.

Controversies exist regarding the origins of the invasive forms of IFG carried out in Africa (Shell-Duncan and Hernlund, 2000; Boyle 2002, Grassivaro Gallo et al., 2006; see in the addendum other works on the list of papers on the topic published by the author in cooperation with other professionals). However, both for IFG and IMG these practices have the body as the main referent. In general terms it is not difficult to imagine that IG originated in those parts of the world having a low technological development. Tools, in fact, permit a "distance" between the body (a system of social meaning) and the external world. The tool helps the mechanisms of projection. If in a particular society the tool development is very low, this does not permit people to outdistance from their own bodies that become instruments, carriers and conveyors of symbols. Genitalia can also assume a strong symbolic and projective meaning. The interventions of removal of male and female parts of genitalia have been differently motivated by those who practices them (Weiss, 1966). In general the motivations are complex, as they could be: "health, a covenant with the gods, entry to maturity or a particular group or class, insurance of immortality or against infertility" with differences between the sexes. (Vernon, 1992, page 128).

Apart the emic justifications, these kinds of interventions can be, if not destructive to sexual experience as some authors suppose, at least re-directing them, even if the ability to feel sexual pleasure can raise compensatory behaviours (Lightfoot-Klein, 1989; Catania et al., 2004; Catania and Hussen, 2005; McGrath, 2011). If the studies on the anatomical and physiological characteristics of the prepuce are enough (Barreto et al., 1997; Halata and Munger, 1986; Bullough and Bullough, 1994; Tylor et al., 1996), there are aspects that are not so deeply studied, such as those related to the long-term effects (anatomo-physiological and psycho-social) of the removal of both male and female prepuce. We have instead a lot of personal communications, direct evidences and reports permitting - unfortunately - weak inferences and a number of speculations (i.e.: Chamberlain, 1989; Derrida, 1993; Goldman, 1997; Johnson, 2010; Hennen, 2010) or papers having a low number of subjects to be convincing (Boyle and Bensley, 2001). It is clear that the removal of a tissue rich in receptors and nerve terminals (Tylor et al., 1996), especially if done at birth, modifies the somato-sensorial cortex, with future repercussions on behaviours upon which, in the lack of strong evidences, we can only speculate (for men: Immerman and Mackey, 1997,1998; Hammond, 1999; Anand and Scalzo, 2000; Boyle et al., 2002; for women: Einstein, 2008). This because the somatic sensory system has different receptors responding to different kind of stimuli and a single stimulus in general activates many receptors (Florence and Kaas, 1995). To reach a coherent perception the central nervous system must interpret the vast receptors array. In the primary somato-sensory cortex the genitals are mapped onto the most hidden part of it, somehow below the toes. As our cortical growth and remodeling continues after birth through youth and adolescence to reach stable adult levels, there are some critical periods of cortical development when specific stimuli and experiences drive major synaptic rearrangements and learning that only occur during the critical period. Therefore it is not difficult to imagine that, if somebody is deprived of the necessary stimuli because some receptors are lacking, the synaptic rearrangements will be different (as it happens, for example, in the visual cortex, characterized by a critical period of plasticity needed to establish visual acuity). There is more: the long-term effects of perinatal pain are unclear in humans (Anand and Hickey, 1987), while studies on animals identified multiple alterations in the adult brain leading to different behavioural phenotypes, related to the timing and nature of the insult (Taddio et al., 1995). Practically no data are available on the role of the number of neurotransmitters and neuropeptides that could cause damages to the developing neurons in this context (Anand and Scalzo, 2000), apart an early work of Talbert et al. (1976) on adrenaline. The majority of researches on the function of hormones on behavioural development are focalized on the role of perinatal hormones in the development of sexually dimorphic copulatory behaviours in animals, therefore there is a small knowledge on the role of hormones in the proceptive behaviours (those soliciting copulas) and on those gender-connected that are not directly linked with procreation (Pinel, 2006). Last but not least, timing is important for hormones. The possibility of single injections of testosterone to masculinize/feminize the rat's brain can occur only within 11 days after birth, even if greater doses can rise effects after the sensible period (Bloch and Mills, 1995). As already said, we have at present no firm ideas about the rearrangement of the high number of molecules affecting future behaviours due to interventions carried out after birth or in the different ages of life. Clearly, as "exactly how the parallel streams of sensory data are melded into perception, images, and ideas, remains the Holy Graal of neuroscience" (Bear et al., 1996, page 344), it is only possible to speculate on the final results of the removal of some genitalia important sensory parts. Immerman and Mackey (1997) imagine that sexual excitability is lowered in men with MC, not only because of the brain reorganization, but also because of the keratinization of the more exposed glans mucosa. They hypothesize that circumcised men are less excitable and distractible, therefore more prone to the diktats of authoritarian figures, such as those of the religious group they belong to. The hypothesis is reasonable, as in primordial populations life expectancy is generally low, so they contain a high number of adolescents, post-adolescents (whose frontal areas are not mature and therefore more prone to "antisocial behaviours"), plus young men capable not only to subvert the hierarchy, but to discuss the social rules. Therefore MC, for example, could have been a tactic to diminish sex drive and distraction, in order to provide additional compliance to the community. Historically, this idea has been already well described by Philo, an Alexandrian Jew born at the end of the first century of the present era: "For since among the

lower lure of pleasure the palm is held by the mating of man and woman, the legislators thought good to dock the organ with ministers to such intercourse, thus making circumcision the figure of the excision of excessive and superfluous pleasure, not only of one pleasure but of all the other pleasures signified by one, and the most imperious" (Philo, 1958, page 99). However, it is also possible that the stratagem was invented to heighten aggressiveness, due to the fact it was impossible for the circumcised man to reach a full and satisfactory sexual life, so he re-directed his non satiated sexual excitement in aggressiveness (if the society he belonged to requested it). In other cultures, more technologically advanced and living in other climates, this was reached creating formal and strong rules able to ban or reduce the sexual interactions (e.g.: forbidding premarital sex, reinforcing the marriage institution, banning adultery, and so on). Of course, all these are hypotheses to be tested.

Psychologists incorporated the notion of "pain imprinting" to all the perinatal surgical interventions (Goldman, 1999). In practice, "by encoding violence in the brain, the mother-child bond will be interrupted and a sense of betrayal will be instilled in the infant" (Zampieri et al., 2008, page 1305). However, data regarding the repercussions in adulthood of MC are few and feeble: for example, in a preliminary study on early trauma and the difficulty in identify and describe feelings (alexithymia), circumcised men scores were higher than non circumcised (Bollinger and Van Howe, 2011). Tonetti-Vladimirova (2009) mentioned the mechanism of "limbic imprint", or the direct link existing between the early experiences in life and the unconscious patterns, both emotional and behavioural, expected in adulthood. For girls, Kizilhan (2010), an expert in psycho-thraumatology, found seven times higher rates of depression, anxiety and psychosomathic disorders in circumcised girls that did not suffer previous traumatic events when compared to non-circumcised girls. On the other hand, a wider number of data exists for reductive forms of interventions on women (Obermeyer, 1999; El-Defrawi et al., 2001; Levine 2002; Baldaro-Verde et al., 2003, Thabet and Thabet, 2003; Catania et al., 2003,2004; Sirigatti et al., 2004; Graziottin, 2004). At this point it can be said that there is a rudimental knowledge on how perinatal brain plasticity evolves in abnormal adult behaviours, as the knowledge of the mechanisms subduing how early lesions on the tissues would generate reorganization or an atrophy of the brain circuitry is poor, for this aspect. Studies using magnetic resonance imaging could add insights to the problem (Renanen, 2010). The advancements of genetics, those regarding the multitude of other signaling molecules during development and those of epigenetics (a relatively new field of study suggesting that certain genetic signals can be turned on or off based upon our lifestyle behaviours, therefore creating different brains, temperaments and behaviours worldwide), could perhaps in the future elucidate some controversial aspects such as how cultural changes could be passed down from generation to generation not only via cultural transmission (Van Speybroeck et al., 2002), generating different temperaments. Even if in mutilated individuals of both sexes compensatory mechanisms can assure the feeling of sexual pleasure and the possibility to achieve orgasm with reduction of the male foreskin (or the female clitoral hood), nobody can exactly say the levels of pleasure that they could have experienced had they been left intact. However, it can be reasonably assumed that even if the sexuality of people with IFG or IMG has not been lowered, it has been at least re-directed. In this perspective, whatever were the reasons for the introduction of the practice inside a given population (environmental, functional or imitation) it is not difficult to predict that the final aim of IFG and IFG is to control and direct sexuality, a very powerful force, especially during the hormonal storms of adolescence and when it reaches its peak, in early adulthood. Regarding MC and its macroscopic presence in different cultures and societies, Magli (2007), for example, resuming some Freud's ideas regarding the envy of the elders towards the sexual vigor and boldness of the younger males of their group, stated that "…we can never forget what is the act *per se*, and the absolute violence with whom it is imposed by adults, owners of the Power, to boys (their own children) before they acquire the right to act into the society using in turn the power". Therefore "[MC] is a way to secure the structure of Power from any risk of rebellion or change and to warrant its subsistence through the physical and indelible system with whom it is transmitted" (page 117). If we follow this logic, MC is a culturally-mediated and coercive trait connected to primordial forms of organization of power, based upon the organ of power par excellence, the penis. The artfulness was to create the so called "initiation schools" in which the coercion of the intervention is masked by the need to adhere to "male schemes" imposed by nature: in this way, denying culture, the power and its coercive

diktats do not appear as being negative, as shown by Clastres (1977), when he considered the philosophy of the primitive power. Its persistence in greater and more advanced societies could therefore be considered as being a subtle form of *mass control*, carried out through generations because of the cultural unawareness or incognizance, or the fact that an individual living into a given culture is "blind" with respect of the majority of the rules and norms of that culture, as s/he accepts them as statement of facts. The latter aspect is very subtle and a number of cognitive biases are at work on it. Thanks to them truth is veiled to our eyes in a kind of limbo between true and false: The architecture of belief systems (how they are formed, sustained, reinforced, changed and extinguished) is a promising and fascinating field of study (for more insights see: Shermer - 2012). IFG follow a similar logic, even if in this case the portion of power that males preserve regards the reinforcement of the control on the high reproductive force of their female counterpart that is linked with the transcendent. Women, in fact, are able to give or refuse to give birth and in this way they assure the link past/future. Male shamans, witches, and all those who assigned to themselves the relationship with the sacred (all of them true "transcendent-snatchers") were, during millennia, very skilful to steal this prerogative to women worldwide, creating other ways to negotiate the relative powers of both sexes.

An aspect to be highlighted regards the fact that not all the traditional societies practicing interventions on one gender are or were carrying out interventions to the other sexual counterpart. This because in traditional societies women do not occupy a symmetric position with respect to males. The main role assigned to them is procreative. This generational power becomes the main reason of all the controls, prohibitions, and taboos surrounding women. Exogamy is usually respected, and women "circulate" outside a cluster of individuals related by blood, through the establishment of marriage relationships among homologous groups (Lévi-Strauss, 1969). As the economy of these groups is generally at subsistence level and therefore it is not possible to control the product of work (but it is possible to control directly the producer), women are the main target, as ruling them it is possible to control "the producer of the producer", as shown by Meillassoux (1978). The supremacy of the elders' authority on the younger members passes through the control of the ways to access to the pubertal women that become of interest only when they are able to procreate, in other terms when it is possible to decide the destiny of their offspring. Clearly, the access to women is regulated by a certain number of institutions and the differences existing among the several populations can explain why some of them intervene on both sexes genitalia and some other do not. It must also be added that in most traditional societies IMG are often a public event, while the public display of IFG is usually performed after the intervention itself, as the intervention *per se* is markedly gender segregated. An interesting aspect that is related to IG regards some personality traits shown by traditional, religious, medical circumcisers and even the advocates of circumcision, that Denniston (2010) describes as carrying this psycho-burden: "a cluster of interpersonal, affective, lifestyle, and antisocial traits and behaviors, including grandiosity, egocentricity, deceptiveness, shallow emotions, lack of empathy or remorse, ruthlessness, determination, irresponsibility, cognitive dissonance, sexual deviance and strong tendency to violate ethical norms" (pages 67-68). The disorder is called *circumcision psychopathy,* and should be first of all better defined and investigated, and then considered in the clinical environment, if the cluster will be correctly identified. Last but not least, any anthropological speculation should contain evolutionary data. Both disruptive IFG and IMG involve anatomical structures that, for Primates, assured them reproductive success. As they are on earth for at least 65 million years, and as all male and female primates have a prepuce, it can reasonably be postulated that the prepuce was present till the beginning. Primates show a vast array of specialized structures in their external genitalia (and different mating and copulation styles – Goodall, 1986), but all show the prepuce and the erectile *corpora cavernosum* (penile shaft and clitoris), with variants (chimpanzees do not have a bulbous glans penis, while baboons retain it – Izor et al., 1984). The female external genitalia of primates is composite as well, and in common they have the *corpora cavernosum* of the clitoris, the labial structures (with different levels of development) and, again, the prepuce. The latter is present in all primates of both sexes and this permits to affirm that, during evolution, it offered advantages, as we cannot imagine that a structure is maintained as vestigial in us and in all our "cousins". As a consequence this also suggests that any intervention on this part of the body in unnatural, as it contradicts natural selection, that usually refines structures to reach excellence, in this case reproductive.

3) The problem of dualisms

The most important dualism for anthropologists is the Gordian knot nature/culture that until recent times produced debates full of an insipid "interactionism" only (mainly because of the poor explicative strength of the abused and misused world *instinct*). But many other "minor" dualisms are notable, like those essential for the "primitive" thought, as they dominate the social organization. In all the societies, for example, the distinction between male and female constitutes one of the most important conceptual frame through which the human being perceives and elaborates the world surrounding her/him (Héritier, 2010). It is widely recognized by many anthropologists that the dualism male/female has very ancient origins, therefore it is deeply rooted in our mind and still works, even in the most advanced societies. It may be responsible for the different gender tactics adopted for human mating (Buss, 2000). It may have also influenced all the patterns of hominid evolution, as most of the models regarding human origins dismiss female influence as a politically driven illusion caused by feminism (Paris and De Waal, 2000). Anyway, to Héritier (2002), the first humans, observing nature, looked at their bodies, discovering the differences male/female in several aspects (not only the morphological ones such as the body differences in connection with the sexual dimorphism, say height and mass), and they formed binary hierarchies such as active/passive, hot/cold, humid/dry. The classic example is blood: males lose their blood only actively or if hurt, while females leak passively their blood periodically, without any possibility of intervention: the dualism active/passive was formed, with the passive in a lower role and importance. Hertz (1978) stated: "Society and the entire universe have a sacred, noble and precious side and another impious and common; a male side [that is] strong and active; and another female, weak and passive" (page 135). For the Author primitive thought attributes a sex to all the universe's beings and to inanimate objects as well, as all of them are allocated into two immense classes when considered as being male or female. To the sex binary hierarchical category others were added, connected with the symbolic meanings that were associated to the genitalia, that reinforced them (Magli, 2007). In short, according to Lacan (2004) another natural binary realism took place. A hierarchy that is the result of the definition of a situation: those *with* and those *without* the phallus, that anthropologist Magli considers even as being the "culture builder" (2007). For the Authoress, because of its strong symbolic meaning it is more important than the hand, the tool-maker. It has been recognized that in most of the primordial societies women were dispossessed by shamans and mediators of their natural contact with the transcendent, as mentioned before. They were exchanged and in many different societies around the world women faced denigration, avoidance, freedom dispossession and confinement in the reproductive function. Both males and females assumed a different symbolic meaning, mainly connected to procreation, as all societies have in common the need of reproduction. Sexuality and reproduction are not in fact the mere product of anatomy and physiology: they are not spontaneous and natural as we can imagine, because in primordial societies they are under the strict control of family members, ancestors, and deities through the creation of norms, taboos and behavioural codes, which overwhelm the biological aspect (Héritier, 2010, page 163). If we add the fact that there are no societies in which a full parity between man and woman has been realized, and that even in matrilinear societies women fall under the tutorship of their close male relatives (a datum that for the feminist tradition is connected to the male need to control the reproductive process), it is possible to reasonably affirm that any intervention on the male and female bodies have not them as a target, but the symbolic meaning that was assigned to them, resulting in different outcomes. However, there is a problem: a gap exists between the real woman and the real man and the symbolic images that they were asked to represent. This can result in individual tensions that can convey various degrees of neuroticism, cured by health healers in traditional societies and that are the domain of psychoanalysis in the westernized areas. Even today and in the most advanced societies we are aware that most of the psychological sex differences are not especially large and that the majority of the differences are due to the separate cultures in which we raise our children (Eliot, 2009). But if the genes and hormones' roles are to spark the light of differences, the flame is flanned by the separate cultures in which we raise our male and female offspring:

and this is reasonably due to the deeply rooted dualisms working in our minds regarding sexes (another reason why in social science they became *genders*).

4) The role of bieliefs

Interventions on genitalia are connected to beliefs deeply rooted in our minds, belonging to larger and harder-to-define evolutionary, political, economic, religious and social habits. Generally speaking, societies are highly conservative regarding beliefs. Changes in general beliefs are extremely slow, while those in personal beliefs could derive from a combination of personal psychological readiness and social shifts in the underlying zeitgeist. We can reasonably think that the first small bands and the first tribes of hunter-gatherers were strongly opposed to changes, rigidly preserving the traditions through the exertion of informal means of social control, based mainly on tattletales and avoidance. After the Neolithic revolution, when religion and government, the two main systems raising mass cooperation and penalizing scroungers arose (more or less five thousand to seven thousand years ago), when the small bands became larger and the first states of agriculturalists, merchants and artisans were instated, they acted as social custodians of the traditions. Complex rituals were created, whose aim was to bolster the rules and inspiring the different "moral and ethical minds" of the populations around the world, permitting the creation of the incredible quantity of personality traits and cognitive styles found worldwide. If the primordial societies strongly preserved orthodoxy, the dualism "conservative/liberals" is reasonably a product of modern times, as many recent studies tending to define the personality traits, temperaments and psychology of conservatives versus liberals have pointed out (Jost, 2003; Brooks, 2007). The fascinating field of study aiming to define the foundations of innate and universally-found systems (the emerging discipline of human nature - Haidt, 2003; Cushman et al., 2006), could add more insights to the question of whether beliefs, ethical and moral concepts have innate bases or are acquired. This because the dualism nature/nurture has been central to all sorts of intense debates, on topics including the ideal political system, effective means of teaching, crime and punishment and so on.

Beliefs formation comes from our brains, naturally forming them because of their need to find patterns first and then to give them meanings. According to Shermer's definitions (2012), *patternicity* ("the tendency to infuse patterns in both meaningful and meaningless data") and *agenticity* (or "the tendency to infuse patterns with meaning, intention, and agency") are the main mental processes of belief formation and retention. Patternicity can be found in studying "universals" such as the incest taboo (in short: how evolution endowed us with moral emotions for avoiding close sexual relationships with relatives in times where the genetic reasons for close inbreeding were not known - Pinker, 1997) or facial recognition (a modality built to scan the others' faces in order to understand emotions, realize when to trust the others and maintain relationships - Eibl-Eibesfeldt, 1970; Ekman and Friesen, 2009). These characteristics are connected to the context and to what extent people believe to take control of the environment, both physical and social. Recently, various instances of ancient innate human pre-programmed patternicities have been presented by Barrett (quoted by Shermer, 2012), adding evidences to the topic. Connected to the tendency common in humans to quickly find patterns, there is also the fact that they impart agency to them. Examples are various: passion fruits, bananas, and oysters are believed to have aphrodisiac effects (probably because their shapes or parts of them remind genitalia); the fashion industry that let people believe that wearing a particular suit would make them a better person, and so on. In practice, we tend to assign to people, but even to objects and animals, an essence that may be transmitted to people and from people to people (Hood, 2009). Of course, behavioural explanation centers on the appreciation that humans are agents who can act intentionally (because of their own reasons), but recent data inform us that

there are a lot of other unintentional experiences, emotions, and behaviours are at work. Malle (2004), for instance, found a "self-other asymmetry", or the fact that each of us perceive and reason about her/himself differently from the way in which we perceive and then reason about the others. Knobe and Malle (2002) have found three fundamental levels at which self/other asymmetries are at work, starting from the extraction of the behaviors to be explained and ending on how people publicly formulate the explanatory hypothesis. It is interesting to note that at each level the actor/observer asymmetries are at work (Malle and Pierce, 2001). This is very appealing for anthropologists and ethnologists as social facts do not exist if there is not an interpretative community able to focus on them and then to extract and analyze them. In this case the traditional attribution theory has been completely revised. Therefore a greater accuracy is needed when analyzing phenomena. Cognitive science, on the other hand, is actively searching for the biases permitting the confirmation of beliefs, in practice how we are committed to beliefs and maintain and reinforce them, through a distortion of percepts to fit preconceived concepts (Farwell and Weisner, 2000; De Martino et al., 2006; Pronin et al., 2002). It must be added that, in addition to the latter considerations, that one of the most important stratagems found to fix beliefs in the mind of people is ritual that, because of its repetitive and rewarding formulas, strongly cements constructs and ideas, as shown by neuroscientists (Graybiel, 2008; Seligman and Brown, 2009). In the case of MC initiation rituals, for example, in which a number of strong sensory stimuli are offered to the initiates (i.e.: loud noises, drumming, sleeping outside, and so on), their aim is to reinforce learning and to rise mnemonic effects that, as the studies on emotional memory have highlighted, are particularly efficacious for memory fixation (when the experiences are emotionally arousing). And every ritual is emotionally stimulating, therefore facilitating longer-term memory (McGaugh, 2004). Recent studies on the tendency for neurons to fire to concepts that are related will add clues to the problem of fixation (Quian Quiroga et al., 2013).

5) The importance of rituals

The anthropologists and ethnologists of the past were strongly interested in myths and rituals because the function of myths is to convey some truths into the mind of people, while the function of rituals is to turn them into action (Eliade, 1976). The rituals dramatize the moral interactions of a group (Gluckman, 1965). This because, for some moments, the mystical powers spread into the ethical order. In tribal societies all the alterations in social relationships (birth, growth, marriage, death, but even the seasonal transitions) are considered as being menaces to the natural order, as they express changes affecting the interpersonal relationships. The efficacy of a ritual consists in showing all the tensions (and the ways to temper them) existing in a society. Living together requires dependence bonds in small groups with a nature relatively undifferentiated of the social relationships: this is a strong source of ambivalences and conflicts. For this reason a ritual conceals the basic social discordances and ratifies the cogency of the existing bonds and loyalties. In effect, first a ritual creates a sort of chaos and the subsequent semantic open-endedness, then it fix again the boundaries separating human and non human re-establishing the "loose of presence" that – for a moment - occurred in the individual (de Martino, 1948). Last but not least, rituals are fundamental to exert the Power (Wilentz, 1999; Magli, 2007). The rituals connected to the interventions on genitalia follow - in general, but with a lot of variants - the scheme proposed by van Gennep (1909): separation from the community; transition period (a sort of "ritual death" in which the intervention occurs); and then the re-introduction of a new individual inside the moral community with a new social status (symbolizing a rebirth to a superior life). These ceremonies, generally speaking, are full of what Turner (1967) called the "polisemic value of symbols", as they display not only an operational meaning, but they must be connected to other symbols in a whole, most of the time very difficult to be disembroiled, as the role of a ritualistic symbol must be found comparing meaning and use, observing what a group makes of it and not only what a group says about it. The prevailing meaning of a symbol associated to a ritual could be found only registering the declared aim in the formal phase in which it appears. Clearly, an intervention on the body without a reinforcing associated ritual – even minimal and poor - has few meaning. For this reason it is

always necessary, during field-works on IFG or IMG with local populations, to distinguish between the *esoteric* information (those furnished by those involved in them) and those *essoteric* (those given by amateurs), bearing in mind the distinction emic/ethic and that an explanation could reflect a personal opinion only.

Clearly, in the most advanced societies rituals have not the same importance, as they don't threaten the composite and variegated social order in which different cultures and subcultures superimpose one to another. Various are the rites accompanying the interventions on genitalia, for MC they exist for Hebrews, Muslims and other minority groups; sometimes it happens that immigrants, in the absence of reinforcing rituals in their hosting country, prefer to take their children in their native lands to be operated. In some countries the complex rituals of ordinary ethnic MC are substituted by hospitalization and "medicalization". The latter term, entered in literature in the 1970s was, according to the sociologists that used it, a form of social control that increased during time as the medical knowledge and the connected technologies became more sophisticated (Illich, 1975; Szaz, 2001; Aggleton et al., 2000), as they invaded into fields that were traditionally assigned to the priesthood. Obviously, no real ceremonial formularies are carried out in hospitals, but even the mere fact to take somebody in a structure becomes a ritual, where the ministers are the medical practitioners. It is interesting to note that a similarity exists between the medicine-based thought and the dogmatic way of thinking of religions in general (even if form opposite sides and with distinct aims and results), as in both it is *assertive* (Schütz, 2000), as mentioned above. This is also the domain that in lesser advanced societies were those of shamans, wizard, sorcerer, warlocks, witchdoctors and so on, in which sometimes the net distinction between a healer and a "priest" did not exist.

6) Some tips useful for activists

The observations presented here have a limitation: they consider the various practices "on the whole" and therefore abstracted from their social and historical contexts. This does not explain how the people upholding or rejecting some categories perceive the relationships existing between the practices themselves and the other procedures and customs found in the same cultural background, and that are mainly in connection with masculinity and femininity. Every culture, in fact, has its own categories and notions regarding manhood/womanhood, reproduction, sexuality, eroticism, pleasure, fertility, beauty, well-being and pain. Forgetting them reifies important existing categories, but this paper aims to understand – perhaps over-generalizing - whether the efforts made worldwide to ban or reduce the impact of IFG and IMG could be diachronically effective or not. Therefore, for each type of the IFG and IMG categories, some important aspects – in general terms and inside a wide anthropological frame - will be considered: the social adhesion to a practice, their symbolic meaning, the presence of reinforcing rituals, whether medicalization is generally present in the context or not, and the possibility of alternatives. Clearly, every culture differs from each other and the traditions - as they produce group consciousness - are passed from one generation to another through the creation of a rich inheritance of memories, with consequent desire to maintain them alive. Some traditions, as shown by Hobsbawm and Ranger (1983) were introduced in connection with a past that was not necessarily present, as it happened, for example, for MC in the Venda group: It was absorbed from the neighboring populations and it was promulgated mainly for commercial reasons (Dionisio and Viviani, 2013). It quickly evolved into tradition and for this reason it stopped having the original practical purpose, as at present the justification for its maintenance is merely ideological (to assure manhood). However, the passing time brings changes into every society, and traditions can be elaborated. If the social changes are very high (as it is now happening worldwide), it could happen that the gap between the practical social life and some customs widens intensely and this implies that traditions, conventions, routines, customs and rites do not remain constant in societies. The destiny of many worthy traditions is sometimes to end drastically: but this rarely happens, and only if the social changes are as much as fast. This because the resistance to change comes from the desire to hold onto traditions that have value. As traditions are often contrasted with modernity, it could happen that holding

to customs while adapting to changing circumstances, could provide a way to build continuity over time, as it happens in some parts of Somalia, where, because of the lack of a central government and the civil wars, infibulations was reinforced (it must be mentioned, however, that in other areas, thanks to the lack of a central control, alternative rites were performed). Cultural change will be possible only if, as suggested by Rochon (1998), values are converted (e.g.: changing views of IFG and IGM as acceptable practices to abhorrent); if new ideas are developed to cope with new situations (e.g.: when alternative rites are created in order to maintain the symbolic meaning of a ceremony without mutilating a sexual part) and, finally, when the values are connected (e.g. when new links are created between phenomena that in the past were believed to be unconnected, as for example, when new medical information highlights the risk of a practice, previously considered as being safeguarding).

Sex	Type of intervention	Social adhesion	Symbolic meaning	Reinforcing rituals	Medicalization	Possibility of alternatives
Female	**Reductive**	high	high	Y	Y	Y
Female	**Expansive**	quite low	low	Y	N	N
Male	**Therapeutic**	from high to low	none	N	Y	Y
Male	**Prophylactic**	quite high	some	N	Y	N
Male	**Ethnic**	high	high	Y	Y	Some
Male	**Other reasons**	some	none	N	Y	___

Table 1 - Main aspects related to IFG and IMG worldwide

In table 1 some of the aspects useful to understand much better whether it would be possible or not to eradicate or limit IMG or IFG in a close/far future are synthesized.

7) Ritual MC

First of all, the most ancient form of IMG will be considered: Ritual MC. In this context MC carried out for religious purposes (e.g.: Hebrews and Muslims) and those practiced in traditional societies will be considered together. This because the distinction between a religious practice and a social custom is a relatively new concept. Before the formation of the existing religions, in fact, all social customs were intended as being religious facts. So strict was the connection, that religion and tradition were view as to belong to each other and still today the majority of revealed religions strongly plunge their beliefs in ancient traditions, or create legendary myths to sustain their establishment. Early peoples and cultures had their assumptions about creation, the need for reproduction, and the sex roles that exerted a great influence long after their original basis had been discarded. When new religious concepts replaced older ones, the archaic assumptions were often kept unchanged or were slightly modified and put in a new grab, this because the restrictions involved were so deeply engrained in a society. Consequently, it will be very difficult to eradicate ritual MC because of a very simple reason: there is an insurmountable barrier, a psychological hindrance, that results in a mental block among the different cognitive spheres in which our intelligence is obliged to surf. It regards, for a believer, the distinction existing between what is *sacred* and what is *secular*. The sacred, in fact, is separated, is "other": or you accept it or you don't. If an individual follows this assertive way of thinking, it becomes impossible to logically verify the contradictions that can emerge from an evaluation of the facts with the aim to know them objectively, without any mediation with the knowledge of the sacred that, of course, most of the times is not rational. Unfortunately, being the sacred the projection of power, the fight is very hard, as the power hides itself exactly where we imagine to have the tools to fight against it: in what was contrived before. The banning/reduction of ritual MC will be possible only with a work in concert with all the "gold dusts" found in every religious context, or those priests, brothers, vicars, monks, nuns, sisters, laypersons and theologians that are prone to doubts about their faith and the connected obligations. Therefore undermining the ideas surrounding ritual IMG will require generations, especially when they assure identity. Here another problem emerges: to many devotees not being in compliance with religious prescriptions can cause serious psychological problems, differently solved by believers that can show different copying styles with conformism (Pargament et al., 1988).

8) Prophylactic MC

Difficult, but not impossible, is the struggle against prophylactic MC. Worldwide MC has been in general declining despite the claimed advantages (e.g.: HIV prevention and other diseases). Even in the States the percentages of newborns that were circumcised have fallen, particularly in the west, due to the high concentration of Hispanic and Asians. In other Anglo-Saxon speaking countries , the percentages are close to 10% (United Kingdom and New Zealand) and 20% (Canada); in Australia MC was common from 1920 to 1960, but the practice was discouraged since the 1970s by the medical authorities. In the USA the eradication will be difficult, not only because of the medical lobby that cannot renounce to a revenue bearing practice, but because a complex mass of historical reasons operates behind the scenes, ranging from moralistic (e.g.: prevention of masturbation) to sanitary (to prevent balanoposthitis, a pathology that plagued many uncircumcised soldiers due to the paucity of hygiene in the battlefields, Tilles, 1999). Last but not least, MC is absolutely the most carried out surgical act in the USA private clinics (Parigi, 2003). Modern mass media such as television appear to denigrate the intact penis and reinforce the idea that MC is an important American cultural trait (Young, 2009). This, according to Waldeck (quoted by Llewellyn, 2006, page 224), has a "multiplier effect", or something similar to the confirmation bias described in the beliefs formation paragraph. We cannot forget that this is a country where, according to a Gallup poll: "58% of the Republicans believe that God created humans in their present form within the last 10,000 years, compared to 41% of the Democrats" and where another "2011 survey found that 81% of the Democrats but only 49% of Republicans believe that Earth is getting warmer" (Shermer, 2013, page 69). This to say that, as it happens in many "developed" countries, science is not considered by Americans one of the sharpest tool man evolved to uncover "reality", probably because scientists in general explain *what* science knows and

not *how* it knows, leaving an open field to deception and illusion, or the fact that we are able to fool ourselves, even in many menial facts of everyday life. In other words, even if one day science will be able to demonstrate that MC is deleterious to man's sexuality, the resistance to change will be nevertheless quite high. Stereotypes are at work, for example: "A true American male *is* circumcised" and this assures identity, both personal and social. This helps self-deception (or the active misrepresentation of reality to conscious mind) that is always operating (and this is valid for the ideas supporting every form of IMG or IFG). Its basic psychological processes are *denial* and *projection*, operating in slightly different ways, as denial could easily engender denial of denial, in order to quickly bury the falsehood. Projection does not require a heightened level of arousal typical of the previous process, as if it would be nice is the facts were true, but no critical if they are not (Sackeim and Gur, 1985). To struggle against these tendencies is usually a life-long enterprise, even if at a social level the leanings to self-deception could be disastrous (Trivers, 2000). In the States it happens that for same defenders of MC the world *intactivism* is cataclysmal. But to defend circumcision "requires minimization of the consequent trauma. It requires the acceptance of false beliefs and the misunderstanding of facts. These psychological factors affects professionals, members of religious groups and parents involved in the practice" (Zampieri et al., 2008, page 1307). There is more, in the countries were MC is actively carried out at birth, the usually complex ceremonies of ordinary ritual MC are substituted by hospitalization and "medicalization", not ritualistic *per se*, but to some extent mimicking certain ceremonial aspects. And this time for (supposed) health purposes and under the umbrella of science (eclipsing the enormous profits deriving from MC). In some American areas there is also a blatant double standard in law and custom. Recently, in Georgia, a mother who agreed to her 10-year old son's request for a small tattoo (done to memorialize his brother, killed in a car crash), was arrested (Earp, 2012). Clearly, a tattoo in a 10-year old boy lands somebody in jail, while a parent's consent for a surgical removal of the foreskin of a newborn, unable to express his opinion, is "normal". In many Anglo-Saxon speaking countries prophylactic MC has been questioned and the possible strategies to ban/reduce it are various, but the best choice to reduce its impact, especially in the States, is to refer to the laws and debates enacted and carried out in the other English-speaking countries involved in the problem (mainly Canada, but also Australia and New Zealand). The popular opinion could be changed thanks to the normative and legislative shifts occurring in similar countries, as: "Only upon the rarest occasions do American like to feel isolated from the mainstream" (Llewellyn, 2006, page 229).

9) MC carried out for other reasons

Regarding MC carried out for other reasons than religion, South Korea is very interesting because MC installment and propagation is recent and connected to the USA trusteeship and the consequent involvement in the Korean War (1950-53). The USA exerted a great influence on the Korean culture: the practice increased in the Sixties, promoted by newspapers, and it is estimated that the overall prevalence is at present 60% in the male population (Kim et al, 2002; WHO-UNAIDS, 2007). This is in contrast with the Korean Confucian's heritage (asserting that the individual's body must be maintained "as the parents gave to somebody") and with the fact that this population generally has not a longer foreskin (some of them considers themselves as being "naturally circumcised" - Kim et al., 2002). Koreans believe that MC is a universal practice (!), that Christianity requires it (!), and is taken for granted. In the Philippines it is estimated that 90% of the male population is circumcised, and the widespread of the practice is less clear that in Korea, even if some connected stereotypes are similar (Lee, 2005). With these preconceptions the banning/reduction will be difficult, unless some big changes would occur in the country that strongly influenced the Koreans and perhaps the Filipinos. In fact, when strong semantic structures are created, they combine lexical representations with schemata originating in the perception of external events and

they form networks that are logically constrained, hierarchical, used for thinking and communicate. The structures of schemata and semantic networks differ, and they depend on how an individual identifies him/herself with family members, ethnic, social, class, and religious groups. New personality adjustments will be possible only if the popular metaphors change, and this is really a challenge.

10) Reductive forms of IFG

Regarding the IFG reductive forms (that are still practiced in 28 African countries) it can be affirmed that: They assure gender identity, even if a full gender status is not reached after the intervention, as it will be achieved only after marriage. The surgery is not the door to female autonomy, even if the rituals accompanying it have been interpreted by many anthropologists as being "initiation rituals". This is a error of perspective, a projection of what happens for MC. To be initiated, in fact, it is necessary to belong to a structure of power, and women in traditional societies do not. They are or were exchanged by males: the interventions are a *social marker* only, signaling an intermediate condition between infancy and adulthood, as a woman's real status will be acquired after marriage (of whom the operation is an indispensable pre-requisite). In this transitional period the girl, even thanks to the intervention, is obliged to acquire postures, gaits, and movements appropriate for the different ways in which every culture represent "womanliness". Nowadays the possibilities of intervention are clear, as in many parts of Africa alternative rites are at present carried out by different governmental and non-governmental agencies in order to decrease the impact of reductive IFG (all the alternative rituals, however, are not mentioned here). The most successful method is the introduction of the "intervention without mutilation", meaning with this that the symbolic sense of the original ritual is maintained, while the actual intervention is not carried out, of course with pros and cons. It is interesting to note that, in the majority of the cases, to start such programs, the "placet" of the local religious authorities is essential. However, a more wholesome approach is required to let the procedure to become widespread, and the process will require more than one generation, because women in these parts of the world are facing a multitude of problems and suffering (e.g.: domestic violence, constant fear of rape, cultural inferiority, lack of basic healthcare and needs) . According to Rahman and Toubia (2000) there is a number of stumbling blocks to be removed: the fact that IFG endow a girl with cultural identity as a woman, imparting her a sense of pride; that is believed that these are rites prescribed by religion, something preserving a girl's virginity (an obsession, unfortunately, found in many other parts of the world); or it is believed to confer beauty and cleanliness to girls, as in the future the husband's pleasure will be enhanced thanks to the intervention. So mothers and grandmothers are directly involved in the continuation/rejection of the practice, as not undergoing the intervention labels a girl as social outcast. This is important, as till recent times for a woman to be intact implied a "social mutilation" and this fear was higher than that of a physical mutilation, but now globalization has made instant communication available everywhere and the "flat world" described by Friedman (2005) is having an immense impact, mostly in urban areas, but already affecting rural populations. So, little by little, the knowledge that the practice is shifting will reach even the most secluded parts of Africa and this will impact on beliefs and stereotypes.

11) Expansive forms of IFG

The expansive forms of IFG, (here the case of *labia minora* elongation only will be considered), show a peculiar trend in some parts of Africa: they are quic**k**ly disappearing in those countries where the social zeitgeist quickly shifted from traditional to modern. The poor governance of many African countries, characterized by an high level of corruption, absence of accountability, weak rule of law, tight controls on information and having in general poor quality institutions, is now changing in many areas, most of all in

those countries in which the political leaders were able to compromise with the traditional foremen (Bräutigam and Knack, 2004). Most of the observers agree that the West ignores the potentials of this geostrategic continent: for the example that the Sub-Saharan Africa has the second fastest growing regional economy in the world (Perry, 2012). As a result, a growing middle class south of Sahara is nowadays not only presenting challenges for governments, but is becoming a potential source of political stability. Its role is very important, as its impetus for innovation is undermining some of the traditional customs and rites, and the traditional gender's roles. Therefore it happens that many traditional procedures, customs and rituals that till not long ago assured a real personal identity to an individual are now dismissed: they are considered outdated, if not even sources of embarrassment, as it often appears when the new generations are questioned about longinymphysm. This because new rough sketch ways to reach identity appeared to the horizon (Dionisio and Viviani, 2013). It is not difficult to imagine that a practice like *labia minora* elongation, for example, even if the emic and justifying litany was "to assure a greater pleasure to the future husband", in reality was a compensatory custom devised to gratify women, probably excogitated by the women themselves and for themselves. In societies in which the marriages were arranged if not forced, the manipulation of the *labia*, even if painful at the beginning, became satisfactory later on (it assured sexual pleasure, it was a form of masturbation). Practically this modality was a mean to permit women to climax during sex with a partner, or even when alone, if the sexual act was not satisfactory. The new horizons opened by the media (with the emphasis on romantic love as a free choice between two partners, a leitmotif from both Hollywood and Bollywood's films and soap operas), the changes introduced by the governments that assured to women a different position in the society, plus the pruderies introduced in many countries by the different Christian sects (to whom many women adhered because they also questioned important customs such as polygyny), were the main sources of change of heart: the practice quickly disappeared and is fading even in many very traditional areas.

12) Final considerations

When facing problems with the magnitude of IG, each of us should take into account some tendencies affecting our information-processing patterns: a) The need to generate predictability and stability from what it can be assumed from the variegated external world. b) The tendency to oversimplify information in order to reduce demand on cognitive resources. These patterns come from our own cognitive reasoning styles and rely upon thinking strategies that simplify social-categorical information. All the modality to reason, the mental structures, the biases that are usually affecting them, and the dualisms rooted in our mind are the legacies of our evolution. We cannot forget, in fact, that we emerged as modern humans recently and that for 99% of the time our genes has lived in the globe, our ancestors were hunter/gatherers and that the majority of our mental structures developed in ancient times, therefore we are "living fossils". The human behavioral repertoire requires the stabilization of psychological mechanisms and cultural transmission through language and observational learning. Our ancestors had to cope with many different environments to survive and successfully reproduce. Therefore they adopted different strategies, with a wide geographical variation. IG defies simple categorization as in different cultures we find short-term and long-term mating styles and every strategy depends on the context. To make a profitable work a deep analysis, to be diachronically carried out inside a given culture, should be necessary. So there is much work to be done in the details of the underlying mechanisms and the context that activated these inner workings: the frame of analysis should contain not only the political system and the cultural tradition, but even the smaller contextual factors, to be found in every human group performing IG. There is more: it would be possible that the structures that have evolved long time ago are, in a world rapidly changing, do not fit for the modern social and globalized environment, creating inertias and tensions. Howbeit, those

structures, modern or ancient, permit to convince us in everyday life that we hold correct assumptions about the world. But when we analyze phenomena having the amplitude of IG, generalizations are dangerous and this is the limit of the table presented above.

As the present reflections are intended to be used by activists, it must be stressed that activists usually have intrinsic and extrinsic motivations that could range from empathic arousal (that provides psychological rewards to the doer, changing his/her state of consciousness) to the need to "solve" some unconscious problems (for IG: those primordial anxieties related to the dread of genital injury or castration, usually buried into the unconscious – Dagher et al., 1973). This could generate good outcomes but also raw, irrational propaganda at its worst. The fact is that also scientists are not unencumbered from biases, and this be easily found when papers related to IG sometimes radicalize their assumptions using statistical nonsense or fiddle with data. In reality, both intactivists and those in favor of IG use defensive mechanisms well described by philosophers and writers before and after Freud and well before the findings on biases by cognitive science. They are common parlance not only in the psychodynamic set, but also in daily life and they are projection, repression, denial, reaction formation. They are used to deceive the self and to justify why we behave within a distorted reality. In conclusion, the scientific method as tool of problem solving - with all its limits - is much better than some unscientific other methods that must be avoided. They are: A) *Tenacity*, or the tendency to cling to certain beliefs despite the lack of scientific evidence. For example, surgeons are notoriously superstitious, as they have a set of patterns that they consider lucky when entering in the surgery room. Even if conscious that no logical relationship exists between the operation outcomes and a particular routine, they are afraid to break these patterns. This attitude could affect also their resistance to change beliefs on MC. B) *Authority*. As for millennia we referred to authorities as a source of knowledge, the tendency can work nowadays as well. As it happened to people that refused to look though Galilei's telescope, some people betray on authority because of it assertive way of thinking. Of course, the appeal of any authority as a means of obtaining knowledge is based upon the possibility to question and to accept or reject the assumptions/information. C) *Intuition*. It is well known that we cannot rely on intuition because many common sense truths when verified, were proved to be false. Our convictions should be substantiated with factual evidence. D) *The rationalistic method*, or the fact that we infer knowledge by reasoning. It happens that many times the conclusions of a line of reasoning is trustworthy only if derived from premises that are true. But sometimes the premises are not as such, but statements of facts or descriptions. Surfing on the IG's literature is really interesting, as it is full of "syllogistic bombs". Example: "There is a positive correlation between MC and HIV protection". "Ahmed is African and is circumcised". "Therefore, Ahmed is protected from HIV infection". We know that this cause-and-effect relationship is not necessarily true. This means that reasoning is essential, but cannot be used by itself to reach knowledge. There are similarities with the *empirical method*, a fundamental part of the scientific method but, using it, pitfalls are recurrent when people rely too much on data and their own experience.

Surfing in the web is extremely interesting and sometimes appalling, not only because new insights and subtleties can be found regarding the innumerable "debates" carried out on IG, but because of the tons of toxic material found. An incredible quantity of fanatics and boors swim the crawl into the lot of material "in pills" and binary assertions (yes/no; I like/I don't), extrapolating words or phrases and embroidering upon hearsays, commonplaces, misconceptions and assorted material. There is more: if somebody hates somebody else, the web is the cudgel. A final suggestion valid for activists in general is to be skeptic, to use the outcomes of the scientific methods, and to be skeptic again towards themselves because a lot of biases are affecting the reasoning, and not only in the composite world of IG.

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