

Gender Fluidity

Disappearing differences as a catalyst for new symbols of commitment



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Abstract:

Subject

Mutations in the notion of gender cause us to question both the existing dichotomy between male and female, and the relevance of our binary system in the future.

Why?

If gender becomes fluid, a lot of things in society will (have to) look, and function in a different way.

How do I intend to explore my subject?

Based on six different, though related developments in the fields of biology, science, society and technology, a future scenario can be made. This will be the starting point for the design proposal.

What do I want to accomplish with my research and design proposals?

With the design I want to allow more flexibility and individuality in the visualization of human relationships and commitments, by updating an existing symbol to the future scenario.

Introduction:



“Congratulations: you are the parents of a beautiful baby-[...]”

I DON'T THINK there are new parents anywhere in the world who wouldn't hold their breath until the missing word was filled in. The distinction between male or female serves as a basic organizing principle for almost every human society¹. The critical importance that we attribute to a newborn's sex, reflects a fundamental belief that the life of the newborn will differ in essential ways, depending on whether it is a boy or a girl².

This classification of sex and gender into two distinct and disconnected forms of masculine and feminine is called a binary system. Gender binaries exist as a means of bringing order. The framework of gender dichotomy underlies the foundations of nearly everyone's understanding of themselves and of others; it has shaped the human condition, causing us to see the world through basic binary categories. From our metaphysics to our linguistics. It is used to describe a social boundary that discourages people from crossing or mixing gender roles, or from creating a new form of gender expression altogether.

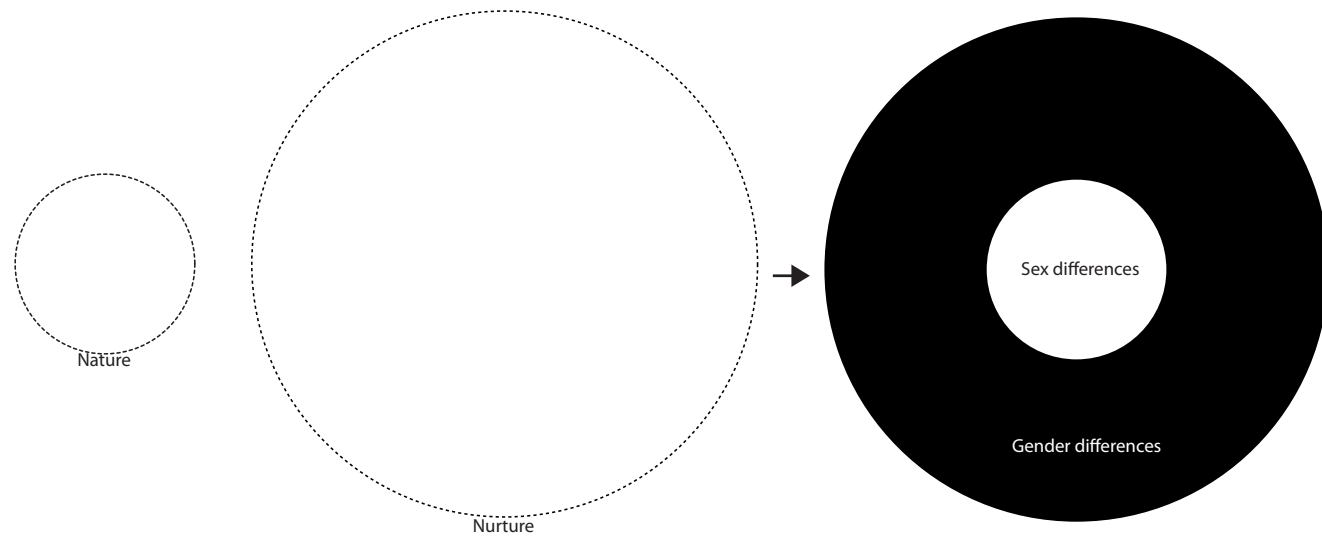
Today however, contemporary (r)evolutions in culture, as well as in science, have come into conflict with this rigid gender binary. While gender dichotomy still maintains a controlling role in practically all human spheres, its value must be called into question. We stand on the verge of a major evolutionary transition, to a point where *who you are* has positively nothing to do with your physical characteristics anymore.

This urges us to redefine the notion of gender. Will it still be relevant to categorize in the future?? In general, two types of statements can be made when talking about the future: prognoses and scenarios. A prognosis is an extrapolation of trends from both past and present; it is about gradual changes, often leaving important other processes that might also take place, aside. Because most of these influences cannot be foreseen, it is more realistic to look at the future with the help of various scenarios³.

This thesis deals with six different, though related future scenarios on gender: first I'll discuss biological developments: research shows the strict division between male and female may have been incomplete all the time⁴, while at the same time science purposely explores the boundaries of the so-called designer human. Secondly there are developments in evolution: an alarmingly fast-growing gender imbalance is happening as we speak, because the 106/100 ratio of male and female newborns is shifting slowly but steadily in favour of girls⁵. Simultaneously scientists worldwide are working on finding new ways to 'create' babies, resulting in what is called the reproduction revolution. Last, there are two developments in society that are relevant in this debate: our community is feminizing, and the Internet allows people to change their sexual identity in just a few mouseclicks.

Based on these six different, though related developments, a future scenario can be made for the notion of gender. This will be the starting point for the design proposal.

The effect of childhood development:



THE FALLACY OF GENDER DICHOTOMY is difficult to imagine for many people, because it is so deeply ingrained in their psyche. Mechanics of childhood development are mainly responsible for that, but some things are biological in origin. To which extent this happens is continually being discussed in the nature vs. nurture debate. A short overview of this debate is necessary to set the outlines of the things discussed in this thesis.

The terms 'sex differences' and 'gender differences' are often used inconsistently in literature; only when the difference is 100% biological is it a Sex Difference (nature), everything caused by environmental or cultural influences must be considered a Gender Difference (nurture)⁶. Because it is often impossible to tell whether research outcomes are 100% attributable to biology, or whether they are some mixture of the interaction between biology and the environment within which men and women experience them, it is more common to use gender differences as a blanket term for sex and gender differences.

In short: gender is the biological sexual 'makeup' of the body, plus the entire construct (social, psychological, legal etc.) that defines ones sexual identity.



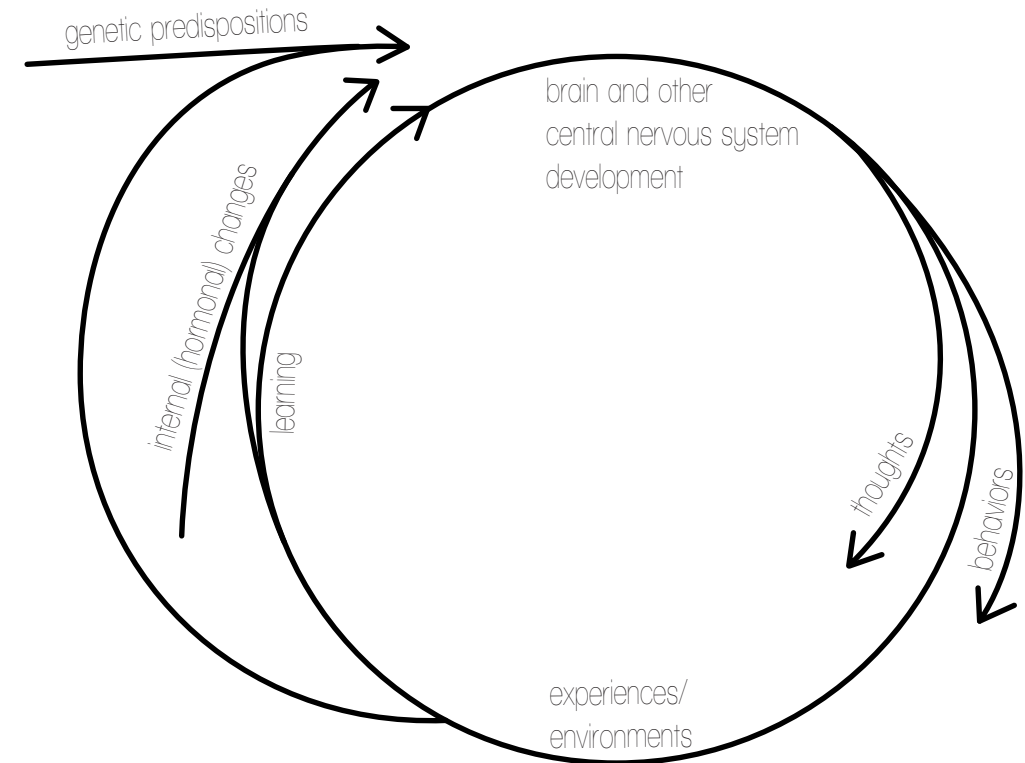
Nature

Nature and nurture operate jointly in the development of cognitive abilities. The human brain is remarkably flexible: alterations result from both different life experiences, and different genetic propensities. The two of them affect future behavior, which in turn influences further brain development. In this way, biological, psychological and societal factors could operate in concert to enhance an initially small difference between the sexes. Similarly, they also could reduce an initially large difference between the sexes⁷. Specific combinations of these three variables cause a result that would not be predicted from either variable alone. Humans are both biological and environmental beings: our biological potential develops within a certain environment⁸.

Nurture

The process by which a society transmutes male and female into masculine and feminine is known as the process of sex typing. Children learn remarkably quickly to choose from the many possible dimensions of human personality only that subset defined as applicable to his or her own sex, and thereby eligible for organizing the diverse contents of the self-concept. Simultaneously, the child also learns to evaluate his or her adequacy as a person in terms of gender schema, to match his or her preferences, attitudes, behaviours and personal attributes against the prototypes stored within. Here then enters an internalized motivational factor that prompts the individual to regulate his or her behaviour, so that it conforms to the culture's definition of maleness and femaleness. This way, cultural myths become self-fulfilling prophecies².

On top of this, marketing makes gender a central pillar of its methodology. At the risk of generalising, females tend to like bright colours, surfaces replete with detail, curvy as opposed to straight lines, humour, and elements that blend in with their surroundings. Against this, males tend to prefer darker colours, surfaces devoid of detail and so on⁹. Our preferences might be biological in origin to some extent, but marketing most definitely increases them¹⁰.



Development 1:

Accepting and acknowledging cases of intersex



WESTERN CULTURE IS DEEPLY COMMITTED to the idea that there are only two sexes. Even language refuses other possibilities. But both in biology as in society (see development 5), there are many gradations running from female to male¹¹.

Already back in 1953, Kinsley et al. referred to a gradual division instead of a dichotomy, in *The sexual Behaviour of the Human Female*:

“It is a characteristic of the human mind that tries to dichotomize in its classification of phenomena.... Sexual behavior is either normal or abnormal, socially acceptable or unacceptable, heterosexual or homosexual; and many persons do not want to believe that there are gradations in these matters from one to the other extreme.”

In the vast majority of cases, people with XX chromosomes are female; ones with XY chromosomes are male. Even children with one or more extra X chromosomes (XXY and XXXY) are to all intents and purposes male.

It all comes down to a small component of the Y chromosome called the SRY (sex determining region of the Y chromosome) gene. In rare cases, the SRY gene can be translocated onto an X chromosome. When this happens the child will genetically be a girl (XX), but thanks to the presence of the SRY gene on the second X, will develop into a male. He may never even know his genetic status until he finds out he is infertile, since XX males are always sterile. The other way around can also happen: some women have the Y chromosome; it only lacks the very small SRY component¹².

No one knows precisely how the SRY functions but it appears to be a switch that turns on sometime during the fourth week of gestation, shunting the fetus away from a default female destination to a male version. The blueprint for the human body and mind is female; in the womb we all start off being girls. That’s why men have nipples for example. Six to eight weeks after conception our sexual identity is created through different amounts of hormones. Sometimes something goes ‘wrong’ in this process; the newborn is neither male or female, nor both.

Since a few decades medical investigators have recognized the concept of the intersexual body. But standard medical literature only uses the term ‘intersex’ to describe three major subgroups with a mixture of male and female characteristics:

1. The so-called ‘true’ hermaphrodites, who possess one testis and one ovary (the sperm- and egg-producing vessels)
2. The male pseudohermaphrodites (the “merms”), who have testes and some aspects of the female genitalia, but no ovaries.
3. The female pseudohermaphrodites (the “ferms”), who have ovaries and some aspects of the male genitalia, but a lack of testes.

Each of those categories is in itself complex; the percentage of male and female characteristics, for instance, can vary enormously among members of the same subgroup. Not surprisingly, it is extremely difficult to estimate the frequency of intersexuality, much less the frequency of each of the three additional sexes: it is not the sort of information one likes to put on a job application. The psychologist John Money of Johns Hopkins University, a specialist in the study of congenital sexual-organ defects, suggests intersexuals may constitute as many as 4% of births. In reality though, most intersexuals are ‘caught’ at the moment of birth, due to recent advances in physiology and surgical technology methods. Almost at once such infants are entered into a program of hormonal and surgical management so that they can slip quietly into society as “normal” heterosexual males or females¹³.

Development 2:

Changing sex



BECAUSE OF AN UNUSUAL MIX OF X AND Y CHROMOSOMES, or an incorrect surgical decision taken on behalf of an intersexual newborn, Sex Reassignment Surgery might be a solution. SRS; also known as genital reconstruction surgery, sex affirmation surgery, or sex-change operation, is a term for the surgical procedures by which a person's physical appearance and function of their existing sexual characteristics, are altered to resemble that of the other sex¹⁴. The first publicly documented sex reassignment surgery took place in Germany in 1930 . Now, even though reliable statistics are extremely difficult to obtain, the estimate number of gender reassignment procedures conducted worldwide is between 1000 and 2500¹⁶.

The procedure is still painful and incomplete, but tissue engineering and somatic gene therapies promise much less painful and more complete sex re-assignment¹⁷. Using gene therapies it will be possible to ramp up testosterone or estrogen production, and selectively suppress sex-linked genetic traits, making hormone treatments unnecessary¹⁸. George Gvorsky and James Hughes from the Institute for Ethics and Emerging Technologies state the following:

"Once we have perfected tissue cloning and genetic engineering, we will be able to craft new, fully functional breasts and sexual organs for transsexuals. This can already be expected in the next two decades¹⁹."

Some people just do not fall naturally into a binary classification; often only surgery can put them there. But why should we care if a "woman," defined as one who has breasts, a vagina, a uterus and ovaries and who menstruates, also has a clitoris the size of a small penis? Why should we care if a man was born a woman? Why should we care if there is people whose biological equipment doesn't make them fit in either of the two categories, or on the contrary: makes them fit in both? In the past thirty years those questions haven't been asked enough. The scientific community has almost unanimously avoided contemplating the alternative route of unimpeded intersexuality.

The answers seem to lie in a cultural need to maintain clear distinctions between the sexes. Society mandates the control of intersexual bodies because they blur and bridge the great divide. However in the 21st century these distinctions are slowly fading.

Efforts to improve the disabilities of binary gender through social, educational, political and economic reform can only have achievements up to a certain level as long as the 'material basis' remains fixed. Therefore a movement called 'postgenderism' confronts these limits by proposing the transcending of gender by social, political but most of all biological means. Dvorsky and Hughes describe a postgendered future as follows:

"Bodies and personalities in our postgender future will no longer be constrained and circumscribed by gendered traits, but enriched by their use in the palette of diverse self expression."

Thus, you can combine the various components of masculinity and femininity in any number of ways, according to your individual preferences, needs and nature.

Development 3:

The disappearing male



Are males becoming an endangered species?

THAT'S THE QUESTION SCIENTISTS AND RESEARCHERS have been pondering since a growing body of evidence shows something is wrong with the sexual health of human males. Mainly in heavily industrialized regions, for example the Aamjiwnaang First Nation community (located next to the infamous Chemical Valley, Canada), the births of baby boys have been declining for years²⁰. A recent study from the University of Pittsburgh reported an overall decline of 17 males per 10,000 births in the United States²¹. According to lead investigator Devra Lee Davis, these numbers translated to 135,000 fewer males in the U.S.²²

Sixty years ago, synthetic chemicals were a futuristic novelty. Since then, the chemical industry has made over 90,000 man made compounds, of which a vast majority have never been tested on their effect on human beings. Common chemicals that are found in everyday things; from shampoo, sunglasses, carpets, cosmetics and baby bottles to meat and dairy products, are said to have a responsibility for the decline in male births. Therefore these chemicals are often called "hormone mimicking" or "endocrine disrupting" chemicals²³. Some species are responding to this rapid evolution by becoming hermaphrodites, for example Australian cane toads and some polar bears, or by changing flexibly from male to female, as in the case of cockroaches²⁴.

So there aren't as many male humans, or amphibians or fish, as there were a few centuries ago. Plus, every generation of boys is less fertile than its predecessor. Male infertility rates are on the rise and the quality of an average man's sperm is declining: sperm counts worldwide have been cut in half in the last 50 years²⁵. This will have severe consequences for our abilities to sexually reproduce.

Already it is the most rapid evolution a species has ever experienced, and if we have to believe the most pessimistic scientific reports; this will eventually result in the extinction of men. This is a prognosis and not a scenario, in the sense that it doesn't take other developments into account like the reproduction revolution described in the next chapter.

Development 4:

The reproduction revolution



“Everything can be inherited, except sterility.”

EVEN THOUGH THIS STATEMENT BY MATT RIDLEY is only seven years old, it may soon be outdated, because the prospects for cloning, parthenogenesis and same-sex reproduction are no longer hypothetical²⁶. In a handful of labs across the world, biologists are trying to make genetically male cells develop into eggs, and female cells into sperm. If successful, their efforts might one day allow same-sex reproduction²⁷. Greg Aharonian, a patent analyst from San Francisco, is trying to patent the technologies that could make this possible. By doing so he wants to undermine the argument that marriage should remain an exclusively heterosexual institution, only because its main purpose is procreation.

Eventually, assisted reproduction will make it possible for individuals of any sex to reproduce in any combination they prefer, with or without ‘mothers’, ‘fathers’, and even with flexible numbers of biological parents.

Development 5:

the feminization of Western society.



SOCIETY CHANGES; so do individual attitudes and behavior. According to a 2008 survey by the U.S. Census Bureau, there are 1.8 million single fathers versus 9.8 million single mothers in the United States. Every year about 50,000 women become single mother by choice²⁸. The way in which children are raised is transforming. Mainly because of the absence of fathers, many children are primarily influenced by females. Feminine attributes thus have come to be considered more important than masculine attributes. That has got consequences for the binary balance in our society. Girls no longer are raised to be mothers and homemakers but rather to be egocentric careerists. Boys no longer are raised to be strong-willed, independent, and resourceful. Already in the 1960's, remarks were made on the generally un-masculine character of the young university students. Male university students tended to be more timid; softer; more lacking in boldness, pride, and independence; insufficiently willing to endure hardship or to challenge obstacles²⁹.

Naturally our feminized society still has masculine elements and characteristics; they are just weaker than 200 years ago. Feminine tendencies on the other hand have become much more pronounced³⁰. We have always had both soft, dependent men, as well as hard, proud men in our society, just the relative numbers of masculine and non-masculine have changed.

It is a complex subject, and hard to measure. But what has happened to western society and our civilization during the past couple of centuries can most definitely be described as a decline in masculinity according to Dr. William Pierce in his essay "The Feminization of America".

On the other hand, masculinized women are more prominent today too; think female lawyers, female executives, female military officers and so on. Even though this doesn't automatically mean these women are manlier themselves, most of these professions nowadays, still require attitude and skills that are considered masculine.

In short: men are becoming less masculine and, to some extent, women become less feminine at the same time: the boundaries of gender are fading.

Development 6:

Digital gender



ANOTHER TECHNOLOGY ERODING THE GENDER BINARY is online sex/gender fluidity. The virtualization of sex, which began with the first cave wall paintings, has been rapid, from widespread access to and use of porn, phone sex, video-interactive sex, and sex in virtual worlds, to the eventual perfection of tactile equipment controlled from afar³¹.

One frequent feature of the online world is the cross-gender presentation of the self, biological men pretending to be women and vice versa³². In the online world of Second Life for instance, a significant minority of the participants have a different biological sex than the avatar they are manipulating. Changing one's digital gender is literally a mouseclick away.

Human relationships and commitments in a postgender future:



SOME SOCIAL CONSTRUCTS, which were at one point necessary, will become awkward and illogical in a postgender future. One of those is marriage. In the last 200 years the individual has been liberated from many social codes. People don't live in small-cell communities anymore, but in the larger networks that cities are. Most of us now accept 'life outside marriage' as morally just. Also, fewer people feel their relationships should follow God's precepts. This situation, combined with the six developments on gender in the future, urge a redefinition of marriage based on a binary society.

First of all, the recognition of legal marriage as an arbitrary contract, rather than a religious, heterosexual, dyadic institution, has been accelerated by the spread of legal gay marriage in Western countries that is happening at this moment. In a postgender future, marriage should and could simply not remain an exclusively heterosexual institution.

Second: not too long ago, getting married meant making a commitment for life: 'till death do us part'. Right now, divorce rates are up to 40%³³, turning marriage into a temporary contract instead of a lifelong commitment.

Last, the institution of marriage has had procreation as its main purpose for years, but the reproduction revolution, combined with the fading boundaries between the sexes, both force and allow this to change. In his book, *The Red Queen*, author Matt Ridley questions the purpose of binary reproduction altogether. Why must a baby be the product of two people? Why not three, or one? The same goes for marriage: why should we limit our commitments to only one other person?

In short: the concept of marriage in a postgender future will be outdated, arbitrary and relatively easy to get out of. What is less likely to be outdated is human commitment and relationships to other people: both privately (with our partners, children and family) and professionally (work, depths).

Conclusion



NOT TOO LONG AGO, the line between boys and girls was clear and rigid. You were either/or. It is in human nature to categorize things, because to be able to capture things in language gives understanding and control: a grip on reality³⁴. But there are various signs that the borders of society's core categorization system -between men and women-, are fading.

First, biology has proved there have always been at least three more sexes than the two we all are so familiar with; making it clear that our binary system has been insufficient all along. Also, both the quality and the quantity of sex changes are increasing rapidly, making what's now a painful and incomplete procedure, into a less painful and more integral sex re-assignment. In the future, a sex re-assignment surgery might be as easy to get done as a nose-job is in the present day.

In a social sense, fading borders between men and women have a lot to do with gradual acceptance of deviant behaviour: a century ago, for example, it was not done for women to wear trousers, make a career or vote, just as it was unlikely to find men wearing make-up, or being a stay at home dad.

Our society is becoming more feminized in general; nowadays, feminine attributes have come to be considered more important than masculine attributes because many children are primarily influenced by females.

Second; there is a fast evolution going on in which the number of male newborns is decreasing rapidly, due to the effect of hormone mimicking chemicals we are surrounded with in our everyday lives. These hormones are also suspected to affect male fertility, making the smaller amount of males that are born less and less able to reproduce. If this evolution continues it might lead to the extinction of the human race. But there is also a reproduction revolution taking place in which scientists try to clone people, as well as fertilize eggs with eggs and sperm with sperm. The consequences of those developments for the notion of sex and gender are still unknown.

Last, people spend an increasing amount of their time online. Internet literally allows people to change sex within a mouseclick, which is opening up another spectrum of possibilities for describing one's sex.

All of these developments indicate that gender is becoming more fluid. In the future we will all be equal, in a sense that biology becomes a choice, not a destiny. This scenario has consequences for our society; it will change what the world looks like. From simple things like toilet signs, to more complicated binary based systems like boy scouts, girl schools, the army and marriage.

Design proposal



SOCIAL INSTITUTIONS LIKE MARRIAGE are constituted in large measure by shared public meanings. If those change, the social institution should change with them; and so should the symbols that are used. Of all things that will (have to) look different in a postgender future, I decided to focus on the ultimate icon of commitment: the wedding ring.

For centuries, wedding rings have been the most famous and instantly recognizable symbols of the joining of a man and a woman, as husband and wife, in the institution of marriage. In a postgender future, a symbol like this could no more exist in its original context. Gender fluidity forces a redefinition of marriage, which will have consequences for the function, meaning and subsequently design of 'commitment' rings.

The hand has always been a canvas for symbols of commitment: since ancient times, marriages have been symbolised by the wearing of a ring, usually on the third finger of the left hand. From this finger, a vein was said to travel directly to the heart; the 'vena amoris', (vein of love). The first wedding rings were fashioned in North Africa from sedges, rushes and reeds, twisted and braided into the shape of a ring. These early rings usually lasted no more than a year. Therefore more durable materials like leather, bone or ivory were chosen to craft this token of love, later followed by metals like iron, copper and brass. Gold or silver rings were only worn during special occasions, to show the groom trusted his betrothed with his valuable property, since wedding rings were worn by the wife only. But made out of rushes, leather, bone or gold, the message stayed the same: 'I am no longer available'.

Men started to wear wedding rings on a larger scale only centuries later, during the Second World War. In times of separation from their beloved, they were said to be in need of a cheery reminder too. This is a small sign of the gender equality development that started around that time. Which in turn paved the road for the future scenario on gender fluidity.

So how does this symbol have to change in order to match the new relationship statuses that gender fluidity will cause? It has to allow more individuality and flexibility in the representation of one's status. Previously, a person was either married or not (anymore). Just as a person was either a boy or a girl. End of story. In the future scenario, both notions won't be this rigid anymore, and neither should the symbol. Therefore, with the help of modern (re)production techniques that will be available in the near future, the ring will be able to show gradual changes in people's gender, as well as their changing commitments to (and relationships with) others.

In this future scenario, instead of buying/receiving a ring at one point in life and wearing it 'till death do us part', people will already have a ring themselves that grows as they get older, like yearnings on a tree. Connected to the wearers 'digital body'³⁵; the database containing your personal information on the internet, a home 3d printer adds a new layer to the existing ring every month, which shape will be a symbol matching the latest changes in one's life.

The design will be introducing a new, flexible etiquette to indicate someone's status. Categorizing? Yes, but instead of 2 options there will be ∞.

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