

# Personality Development and LGB&T People: A New Approach

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## Context

The investigation described in these papers adopts a new and innovative approach to the development of personality, identity, gender and sexuality. There have been multitudinous studies on these issues. Broadly they break down into two camps. The first are the neurophysiologically based studies on early development which examine the growth of these capabilities in terms of brain maturation and neural function. The second are the traditional social learning and psychodynamic theories: these begin by considering mature brain functioning, from which constructs are created which seek to explain the relationships between the conscious and unconscious mind, and how learning and development takes place in early life. The first type can be described as “bottom up” studies. These can be contrasted with the “top down” approach taken by the traditional psychodynamic and social learning theories. A major deficiency to the present time has been the inability to provide an adequate link between the two processes. That omission is addressed in this analysis where, because of their early origins, the development of atypical gender identities can be used to provide the link that is required. Therefore it becomes possible to trace a continuous pattern of identity and personality development which extends from infancy to adult life. The timing and nature of the transitions between these two processes can also be mapped. It is shown that the fundamental, or core, elements of personality and identity are first driven by the search for identity, and only afterwards, by the search for reward. The social, historical and theological consequences are all important. Therefore an extended neurophysiological and psychological analysis is undertaken to examine the natures and origins of these physiognomies. A second historically and theologically based analysis is conducted which examines the social impact and the theological consequences of this new research. In the paper which follows, fresh insights are explored through the adoption of a new and original approach.

## 1:0: Introduction

Issues concerning the origins and nature of transsexuality and homosexuality are not well understood. A new approach is adopted in this investigation which links the advances in neuroscience on self-identity and personality development with the psychodynamic and social learning theories which have traditionally been used<sup>3</sup>. This paper is based on an earlier document: Gilchrist, S. (2012): “*Personality Formation: Identity and Gender*” which can be accessed by the web link provided<sup>4</sup>. This investigation has been carried out with academic support. It also draws on the

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<sup>1</sup> Personal Biography <http://www.tgdr.co.uk/documents/SusanBiographyPapers.pdf>

<sup>2</sup> With footnote updates to August 2016

<sup>3</sup> This paper is available online at: <http://www.tgdr.co.uk/documents/201P-PersonalityDevelopmentAndLGBTPeople.pdf>

<sup>4</sup> Gilchrist, S. (2012): “*Personality Formation: Identity and Gender*”: <http://www.tgdr.co.uk/documents/204P-PersFormIdentityGndr.pdf>

author's involvement in research work on how self-identity develops in violent tribal conflict situations. Some of the background to this analysis also comes from the author's need to explain a separate personal journey. That journey is described in separate publications<sup>5</sup>. This is an extended account which aims to consider all of the key issues.

It is important to note that gender and sexual identities form independently of each other. Therefore as wide a range of sexual orientations and identities are found within the gender variant communities as those which exist in the population at large. Thus being transgender is no indication of sexual identity or orientation, and the reverse also applies. However the same types of formation processes are involved in both cases. In many respects gender and sexually variant people share similar issues in terms of their relationships with society and that is why they can be considered together in this account.

This paper forms part of a study on scientific and theological perspectives on gender and sexual variation, including the development of self-identity and personality using a new neurophysiological and psychological approach. For the latest information, bibliography, summaries and publications by the author see: <http://www.tgdr.co.uk/articles/index.htm>.

In this paper interpersonal and intrapersonal relationships are considered and it is shown how the processes involved in the creation of self-identity and personality are developed in tribal, gender and relationship terms. The interactions between nature and nurture are considered and the role of mirror neurons is discussed. A key feature involved in early development is the role that is played by possessive imitation<sup>6</sup>. Girard defines this as mimesis, but different investigators describe it in different ways<sup>7</sup>. It is demonstrated using current research that newborn babies begin life both in terms of physiology and psychology by seeking to imitate everything they encounter, and that their fight for development is driven by an innate drive for imitation and possession, and the acquisition of the rules on which to act. It is also argued on evolutionary grounds that the process is tuned to ensure that the maximum possible degree of individuality is created.

This approach contrasts with that of the traditional psychodynamic and social learning methods, where cognitive processes<sup>8</sup> are understood to influence the development of personality and identity

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<sup>5</sup> Gilchrist, S. (2011): "*LGB and T People: Labels and Faith*": <http://www.tgdr.co.uk/documents/002B-LabelsFaithText.pdf> and Gilchrist, S. (2011): "*Verses in Search of the Self: Poems and Commentary*": <http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

<sup>6</sup> This is the search for possession for its own sake. Rivalry and competition are the outcomes which are encountered, and these provide the stimulation for development to take place. It is not sought for the purpose of copying of other or for any goal. It seeks domination instead. Neurophysiological studies indicate that possessive imitation is an internally driven response which is triggered by the interactions of neurons within the brain.

<sup>7</sup> Girard developed his ideas from the study of very young babies. He noted that the desire for possession existed in its own right. It was not for the object that was sought. His fundamental concept, was that desire is mimetic (i.e. all individual desires are borrowed from other people). He also argued that all conflict originates in mimetic desire. This in turn leads to mimetic rivalry, and that results in violence unless it is checked. Dawkins argued that the competition created by evolutionary demands drove development forward. What is common to both is that they separated the drives for imitation, rivalry and competition from any objective or goal that was being sought. The neurological research of Gallese and others determined that the contrasting drives of empathy, rivalry and possessive imitation arose from an inbuilt neurological response.

<sup>8</sup> Cognitive ability is defined as the capacity to perform the higher mental processes of reasoning, remembering, understanding, and problem solving. This requires the ability to work with information in a meaningful way, to apply new information to that which has already been gained, perform preferential changes, use reasoned procedures to alter opinions, and to search for rewards. It needs sufficient neural integration and co-ordination to be present. In the cognitive continuum theory, intuition and rational analysis are defined as two modes of cognition or recognition that can be placed at the ends of a continuum. Separate serial and parallel thought processes are involved. Intuition refers to rapid, unconscious processing and low control, while analysis refers to slow, rational, conscious and controlled thinking which is able to examine the consequences and relate cause to effect. Although elements form beforehand it is shown in this investigation

at all times of life<sup>9</sup>. Instead of attempting to take existing theories of personality development and moulding them into forms which give traditional explanations of these conditions, the approach which is adopted is to use the now extensive knowledge of these experiences to test the theories themselves. A consequence of this is that a continuous process of development can now be presented. This traces the progression of self identity from the neurophysiology and neuropsychiatry of infancy through to the traditional cognitive approach which psychiatry and psychoanalysis adopts. It also bridges and explains the gap between the two sets of disciplines that are involved.

## 1:1: Stages in Development

It is demonstrated that there is a fundamental change in the nature of the learning processes during the first four years of life. A rapid transformation, which includes a major advance in neural capabilities, occurs between the ages of between one and a half to three years<sup>10</sup>. During this transformation period the pre-frontal cortex of the brain starts to function as a co-ordinated unit. Neurological development and brain plasticity, which is the ability of the brain to physically re-shape itself, is shown to develop in ways which maximise the input of information at the time when it is most needed; and later to ensure that a constancy of personality is created. It is established that the unconscious basic, or core, elements of identity and personality are irrevocably fixed from the age of three years<sup>11 12</sup>. The earliest that children become aware of any incongruities in this is around the age of four years. This means that the conflicts which children become aware of are driven by their subsequent attempts to rationalise and give reasons for the discords that have already occurred. At the time of initial formation the cognitive abilities had not yet developed, but in the later attempts at rationalisation these cognitive abilities are heavily used.

Before this transformation period, in work pioneered by Gallese, Dawkins, Girard and others<sup>13</sup>, it is shown that internally driven and contagious physiological forces dominate the development processes. Without overall neural co-ordination the development proceeds in a fragmented way. At this time possessive imitation is sought for its own sake. No goals are set. Progress takes place through the inbuilt neurological processes of acquisition and inhibition, and the rejection of what

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that the cognitive abilities do not have significant effect before a rapid neurophysiological transformation period takes place somewhere between the ages of one and a half to three years. Two years is taken as the median value in this account.

<sup>9</sup> This approach uses the principles of neuroscience to match the physiological processes of brain development to the information processing capabilities that are formed. There is a transition from the exclusive and contagious domination of the internally generated forces of physiological development at birth, towards the situation in which these internally generated forces become moderated through the cognitive abilities that become available in later life. The learning capabilities that exist before the neurophysiological transformation period are much more restricted in scope than those which are available after it. As well as maximising human potential, intellectual capability and individuality this investigation shows that a constancy of personality is also created. This transition takes place during the first three years of life but children do not develop the cognitive abilities which allow them to question any inconsistency that have occurred until around the age of four years. The standard psychodynamic and social learning theories provide explanations for these early development processes which presume that they are cognitively based.

<sup>10</sup> See section 6:0 of this document for the relationships between Freudian and Piagetian development stages

<sup>11</sup> This is also described as a core identity. It can be considered as that of having a basic association of the identity one belongs to. In this analysis it is associated with a tribal allegiance and no sense of conscious awareness need exist. No behavioural implications of any kind are involved. The term core gender identity is used in this analysis, and this is a term which has commonly been used.

<sup>12</sup> Since this document was written much more evidence for the "Domestication of the Brain" and for the neurological processes involved in establishing this constancy has become available. For an account of this see: Gilchrist, S. (2016d): "A New Approach to Identity and Personality Formation in Early Life": <http://www.tgdr.co.uk/documents/218P-InfluencesPersonality.pdf>

<sup>13</sup> See for example: Gallese (2003; 2009; 2013); Gallese and Sinigaglia (2011), Girard (1965/1961; 1977/1972); Girard et al. (1987), Dawkins (1989/1978); Decety and Meyer (2008); Dennett (1987); Diamond (2002); Garrels (2006); Heylighen and Chielens (2009).

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does not succeed. For the same reason the expectations others seek to impose on the child's future roles have little effect. The contagious and feed-forward nature of the driving forces may be expected to maximise the amount of poorly co-ordinated information that is collected. This can be characterised as a period of acquisition. It is demonstrated that integration into society is obtained by the creation of tribal allegiances and collective senses of identity. Thus before the neural transformation period it is concluded that no personal concepts of self are formed.

A characteristic common to all of the neurophysiologically based investigations is that development begins with the creation of primitive and isolated components of thought which then start to coalesce. Through this coalescence increasingly complex elements are created. Current research suggests that quorum sensing mechanisms are involved<sup>14</sup>. It is argued in this investigation that the coalescence of these elements is an integral part of the rapid neurological transformation period at around the age of two years. The cognitive attributes of reasoning, remembering, perception and intuition require a sufficient degree of neural co-ordination to be present before they are able to develop, and there is an explosion in these cognitive abilities when this occurs. From this transformation period onwards the internally driven physiological forces become moderated by these later developing externally focussed cognitively driven forces which are used by the traditional psychodynamic and social learning theories.

It is considered that these cognitive elements only come into effective control after transformation occurs<sup>15</sup>. From this time onwards two contrasting formation processes become active<sup>16</sup>. As a consequence development is characterised by the continuing struggle between these internal, contagious, feed-forward and physiologically driven forces present from birth, which react against the later, controlling, feed-back and externally moderated processes of cognitive development.

This analysis identifies a third phase, when a constancy of personality is created. That occurs between the age of two and three years. During this period the connections in the pre-frontal cortex of the brain which are more used grow stronger and those which are not die back. As a consequence the core elements of personality and identity that have been formed at around the age of two years become permanently and physically locked in place. The same person can be recognised even over gaps on many years, and this gives the constancy of personality<sup>17</sup> which is needed to pursue an ordered life.

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<sup>14</sup> Quorum sensing occurs can be considered akin to crowd behaviour. When a particular point of attention is discovered all of the members of the crowd rush towards it to find out what it is. This can only when a certain threshold of communication is passed which informs people that the point of attention exists. The outcome is determined by the momentum that is created. It is not the product of a rational choice.

<sup>15</sup> Mirror neurons play an important part in early development. When an action is carried out by one individual; exactly the same neurons fire in another person who is observing it. Learning to inhibit this action in the observer is a key part of the learning process. This may be regarded by some as evidence of cognitive abilities. It is not regarded as such in this investigation since the need to inhibit such actions is seen as an inbuilt autonomous response.

<sup>16</sup> This investigation shows that the major processes involved in the early development of the core elements of personality and identity reach a steady configuration by around the age of three years. However children do not achieve the level of conscious awareness that is needed to question what has happened until around four years of age. Therefore the only elements children are consciously aware of come from their subsequent attempts to create rational explanations of what has already occurred. The social learning and psychodynamic theories adopt a similar approach through their attempts to explain how the brain works; and how early development takes place. In this context the social constructs of the ego, superego and id, for example, may be considered as artefacts which try to explain in rational terms what has happened during early life. These are attempts at resolution, in which the cognitive abilities are heavily used and they provide very relevant models when they are applied to later life. However it is shown in this investigation that they cannot access what happened during infancy, since the cognitive abilities and the neural co-ordination which is needed for this did not exist at the time when this early development took place. See section 12:6 of this document for more discussion.

<sup>17</sup> See section 9 of this document

Around the age of four years the development of neural abilities leads to the formation of a functioning "Theory of Mind"<sup>18</sup>. This empowers people to perceive what each individual person considers to be his or her own self-identity by viewing it as if from afar. It is the age when many transsexuals begin to be aware that "something is wrong" with the gender identity they are expected to possess. The differences in timing are important. Much of these processes of early development occur before children are able to use their "Theory of Mind" to make their own assessments. Unless some trauma occurs which brings them to conscious awareness, conflicts which are created by these processes of early development are likely to stay hidden in the unconscious mind. When that happens a later onset may occur<sup>19</sup>.

It is argued in this analysis that the stimulation provided by this conflict enables the highest achievements of human potential and individuality to be created. The pre-frontal cortex of the brain is very primitive at birth and it remains largely in this state until the neurophysiological transformation occurs. This period of delay is very long when it is compared to other aspects of human brain development and to other species. It is argued by some that this enables the highest potentials of human ability to be obtained. However the downside of that is that more can go wrong with the process<sup>20</sup>. The timings of these processes are critical. If the initial development process is too strong or lasts too long the ability to develop a coherent self identity is damaged or destroyed. On the other hand if the cognitive assessment processes dominate too early or becomes too great, people increasingly become products of their surrounding environment, and the ability to create the richness and uniqueness of every person's identity decreases.

Gender dysphoria is used as a case study to link the two processes. Core elements of personality, including basic concepts of gender and sexual identity are shown to form before or during the neural transformation period. These are found to concern identity alone. Characteristics which originate after the transformation have behavioural features which cognitively link desire to reward. Different behaviour and types of conflict are encountered and the impact of these is assessed<sup>21</sup>. Children are only able to question this after it has occurred. This paper identifies the formation of personality and self-identity as a process of linking together individual concepts to form a coherent whole. It is argued that the source of the conflicts that are encountered with gender and sexual variation come through the failure to build a coherent sense of self identity, and that this manifests itself in identity terms.

This examination considers both gender and sexual variation. However recognising that they separate conditions which act independently of each other, and acknowledging the differences between them is important. The range of sexual orientations, inclinations and attitudes amongst transgender people is as great, if not greater, than that in the population at large<sup>22</sup>. For people who

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<sup>18</sup> See section 4 of this document

<sup>19</sup> Research workers have struggled to define what consciousness is and also its neurological base. A general definition is: "Consciousness is the state or quality of awareness, or of being aware of an external object or something within oneself". This should also be compared with the identification in this paper of a "Theory of Mind". It has also been defined as: sentience, awareness, subjectivity, the ability to experience or to feel, wakefulness, having a sense of selfhood, and the executive control system of the mind. Despite the difficulty in definition, many philosophers believe that there is a broadly shared perception about what consciousness is. It is described in the Blackwell Companion to Consciousness as: "Anything that we are aware of at a given moment forms part of our consciousness, making conscious experience at once the most familiar and most mysterious aspect of our lives": Schneider, S and Velmans, M.:(2008):

<sup>20</sup> For further information on this delay in the development of the pre-frontal cortex, see section 2:1 of this account.

<sup>21</sup> See section 1:3 of this document.

<sup>22</sup> Transvestites and transsexuals are people who feel some discomfort with their gender identity. Many transsexuals feel that they have been born into the wrong body, and surgery is needed to correct this mistake. Transvestites are generally happy with their male gender identity and most function happily as heterosexual males, however some discomfort remains. The need to cross-dress may become an overwhelming compulsion but it is usually only periodic. There is a vast range of experience and this summary cannot do justice to the range that is encountered. For a personal commentary on

identify as lesbian or gay the range of attitudes to gender is just as large. Sometimes that independence is not understood, not just by heterosexual people, but also by lesbian and gay people who may regard transgender experiences as part of a sexual drive<sup>23</sup>. However the dynamics involved in the creation of the respective identities is the same. Both groups are fellow travellers in their relationships with society and it is this commonality on its own which allows them to be considered together in this account. It is easier to begin by considering transsexuality and transgender issues. This is because the conflicts these create present themselves primarily in identity terms.

## 1:2: Impact and Visibility

It is demonstrated in this analysis that there are two distinct and differently directed processes involved in creating a gender identity. These are conflicts which straddle the conscious and unconscious mind. When the two processes are in harmony little difficulty may be expected. However when they contradict each other strong trauma can be found. Many transsexuals may become aware that “something is wrong” from about the age of four years. For others however, the effects of this conflict may stay hidden until some trauma or change causes it to erupt into the conscious mind<sup>24</sup>. Once the genie is let out of the bottle it cannot be easily put back. For some people a late onset of the gender conflict occurs.

These features make it difficult for other people to understand the true nature of these conditions and to identify the extremities of the trauma that can be encountered. In theory gender identity might be used as a model to examine these processes. The problem with this is that the development of the core gender identity takes place before any conscious awareness can be created. When there is no clash between the results of the earlier and later development processes they will simply act together to affirm and strengthen the understanding of gender identity that is consciously formed. This means that no direct evidence for any earlier process will be observed. The standard theories on the development of gender identity presume that this is driven by the cognitive processes alone. This is also why a gradual and later development of gender identification is assumed to take place<sup>25</sup>. However in the case of gender dysphoria strong conflicts certainly occur, where people develop a

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these cross-gender experiences see: Gilchrist, S. (2011): “*Verses in Search of the Self: Poems and Commentary*”:  
<http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

<sup>23</sup> Cross-dressing is also part of the lesbian and gay sub-cultures. Drag queens are an obvious example but it is also a statement about what people feel, and want to be seen as within the lesbian and gay culture itself. There is no concern about gender identity, unlike transvestites and transsexuals where that is the principal focus. The motivations focus on behaviour and creating an impact instead. Of course this is not an exclusive definition and there are many instances where the boundaries between identity and relationships are crossed.

<sup>24</sup> Puberty is one time when this awareness often first occurs.

<sup>25</sup> In the standard and conventionally accepted gender studies it is shown that in young children, their initial concepts about gender are quite flexible. They do not begin to notice and to adopt gender-stereotyped behaviour until the age of two or three. A few years later, their concept of gender becomes quite rigid. Before the age of five, children do not seem to think that gender has any permanence. A pre-school child might ask his female teacher whether she was a boy or girl when she was little, or a little boy might say that he wants to grow up to be a mummy. Toddlers think that changing clothes will also change gender. It is not until children understand that boys have penises and girls have vaginas that they know that changing clothes does not change gender. Research suggests that children’s concept of gender develops gradually between the ages of three and five. Once children begin to think about gender as a stable trait, they also start to incorporate gender into their own identity. From around that time they become motivated to relate to other members of their group, and to seek out gender-related information, often becoming very strict about adhering to gender stereotypes. When they are between seven and ten years of age children become more relaxed about maintaining these gender stereotypes. This is therefore a process of self-discovery and self-awareness. These require cognitive abilities to be present. Traditional development theories presume that these processes act on a blank canvas and that gender identity is entirely created through the behaviour predicted by the social learning and psychodynamic development theories. This analysis shows that the elementary core gender identities are created by pre-cognitive processes and that the conscious allegiance to a gender identity is the result of a struggle between these unconscious and conscious conflicting demands.

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core sense of gender identity which is contrary to their biological sex, and also in opposition to the outcome that the cognitive development processes expect<sup>26</sup>. The unconscious sense of core gender identity is shown to be fixed at the latest by the age of three years. This means that gender dysphoria becomes a valid test to model how development proceeds and that this can be applied before, during and after neurophysiological transformation occurs.

The forming of personality and self-identity is a multi-faceted process. It is demonstrated that the physiological, neurological and psychological aspects of brain development act together to form a finely tuned system in which the maximum amount of individuality, possessiveness, intelligence and inquisitiveness, together with the minimum degree of energy expenditure is generated. The interactions between interpersonal and intrapersonal development processes are described in the paper and it is shown how some people may develop a gender allegiance which is contrary to their biological sex<sup>27</sup>. It is the need to make sense of this identity which means that each person, and the demands of society, create an exclusive and polarised gender allegiance, which is either male or female and it is one to which total loyalty is required<sup>28</sup>. The ability to question this relies on the development of a "Theory of Mind". This only becomes sufficiently active after the core elements of personality and identity have been formed. For many transsexuals it is the rejection of the assigned gender identity that drives the dynamics of the conflict, and that is the medium through which the discord is expressed.

### 1:3: Morality and Duality

A great deal of research on transgender issues has been focussed on determining the age when the unconscious sense of the gender one belongs to has become permanently locked in place. Some would argue that this happens due to the influence of pre-natal hormones. However even those who have only used social learning principles to research transgender issues have found that this lock has been permanently applied at the latest between the ages of two and three years. This closely coincides with the time when the neurophysiological transformation occurs. It is also before the cognitive abilities become active. That means that the processes which lead up to the creation of the core elements of identity and personality are primarily controlled by the physiologically driven forces acting alone. Instead of acting on a blank canvas, it also means that the social learning and psychodynamic theories can only be used as overlays on what has already been formed.

It is also shown that the characteristics and conflicts which arise from sources before any cognitive continuum becomes active are identity driven. This means that as wide a range on moral attitudes,

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<sup>26</sup> Early medical involvement in the management and treatment of transgender and intersex people was made on the assumption that the standard description of the development of gender identity, as is described above, applied. Social learning theories were used and it was presumed that a blank canvas was available before these gender associations could be learned. The experience of treating gender variant people showed that this was not the case, and gender identification was firmly fixed at a much earlier age. Furthermore they came to the conclusion that it was impossible for the core gender identity to be changed any later than three years of age. This still did not fit the actual circumstances and one investigator (Stoller) tried to adapt Freud's theory of psychodynamics by presuming that the desired state was female, and not male, in order to bring this threshold down to an age of between one and two years. However he still tried to apply the psychodynamic and social learning theories on this basis. This persistence had disastrous consequences. Stoller and Money continued to treat and report the results of their gender and sexually variant people on the presumptions that social learning theories applied, after their own results had challenged the conclusions that were made. That led to the discrediting of their work. Work on intersex children, who were reassigned/assigned to a particular gender soon after birth also showed that considerable trauma could occur. This has led to the current practice of deferring surgery on intersex children until they could decide for themselves, the gender identity that is correct. For more information on this see section 5 of this account.

<sup>27</sup> See section 10:2 of this document.

<sup>28</sup> It is noted that with the more flexible attitudes in present day society there are a greater number of people who are describing themselves as "Gender Queer, and are refusing to align themselves exclusively with either sex.

beliefs, inclinations and responsibilities are found in these groups, which include gender and sexually variant people as those which occur in the population at large. This is in contrast to the later forming reward driven characteristics and conflicts where behavioural motives are shown to be involved<sup>29</sup>. As a consequence a moral duality is encountered which demands the welcome of same-sex and gender variant relationships that are given in love and faithfulness while condemning those engaged in for abusive and illicit sex. This is contradicted by the traditional teaching of the Christian Church, which presumes that all such conflicts must be reward driven and are always in pursuit of immoral and inappropriate sex. The management methods required for reward driven and identity driven conflicts are almost opposite to each other. Therefore great harm has been done because the wrong management methods have been applied and by the medical misdiagnoses that have been made because of the religious presumptions that have been applied<sup>30</sup>.

## 1:4: Management

It is hardly surprising to note that conflicts which stem from issues arising before the neural transformation period have different characteristics from those which arise after it. The latter are here described as reward driven conflicts. Standard management techniques used in psychology and psychiatry may be employed for these since the sources for the reward driven conflicts arise only after the cognitive abilities are in place. The earlier identity driven conflicts develop because of discordances with the core senses of identity and personality which have been created<sup>31</sup>. It has been shown that these cannot be changed. The fixed nature of this foundation is a consequence of the constancy of personality that is needed<sup>32</sup>. All attempts to fight the conflicts do not succeed, for the more they are fought or suppressed the stronger they become. An approach, which is presented in a companion paper "*Management Techniques for Gender Dysphoria with Particular Reference to Transsexuality*" (Gilchrist, S. 2013)<sup>33 34</sup>, puts forward a strategy for transsexuality which aims to calm the dynamics of the conflict. It does not itself remove the latency but it does enable people to find the correct path. It seeks to create an inclusive identity so that considered decisions can be made. This may lead towards gender reassignment or it may not and it is fundamental to its functioning that either result must be treated as being equally correct. It works by enabling people to find a balance between the need to be fully oneself in the life that gender allegiance demands and the loyalty to the commitments and relationships that have been made in the life that has been built. This balance changes with time and attempts to fight the conflict destroy the transcendence required.

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<sup>29</sup> Reward driven conflicts rely on cognitive abilities to associate the desire for a goal with the pleasure of the reward. The acknowledgement of distinctions between these reward driven and identity driven types of conflict is not new. In conditions which require medical intervention, equivalent clear distinctions are currently made in the types of treatment and management methods that are applied. This is discussed more fully later in the paper

<sup>30</sup> Footnote amended August 2016: For a full discussion of these religious dimensions see: Gilchrist, S. (2016): "*Foundations of Science, Sex and Gender Variation in the Christian Church*": <http://www.tgdr.co.uk/documents/217P-FoundationsSexGender.pdf>

<sup>31</sup> The existence of the two conflict types is well already known. Although the presumed driving mechanisms are different they parallel the distinctions that Freud made in his considerations of deviation and perversion (used in the non-pejorative sense). The equivalent management techniques may also be used. A much broader remit is given to the role of compulsion in this analysis. Instead of compulsions of morbid, such as those associated with depression and addiction, compulsions of libido which compel people to achieve the greatest achievements and fulfilments in society are also recognised. See section 5:6 for a fuller description.

<sup>32</sup> See section 5:5 in this account. Since this document was written much more evidence for the "Domestication of the Brain" and for the neurological processes involved in establishing this constancy has become available. For an account of this see: Gilchrist, S. (2016d): "*A New Approach to Identity and Personality Formation in Early Life*": <http://www.tgdr.co.uk/documents/218P-InfluencesPersonality.pdf>

<sup>33</sup> Gilchrist, S. (2013): "*Management Techniques for Gender Dysphoria with Particular Reference to Transsexuality*". This paper can be accessed at: <http://www.tgdr.co.uk/documents/205P-ManagementTechniquesInGenderDysphoria.pdf>

<sup>34</sup> Footnote added August 2016: See also: Gilchrist, S. (2015): "*Personality Development and Gender: Why We Should Re-think the Process*": <http://www.tgdr.co.uk/documents/209P-RethinkPaperFull.pdf>



People engage in cross-gender and same-sex relationships for many reasons. One is from the outreach of personal love; the second may be for sexual satisfaction, a third is to find an identity which enables people to be true to their own selves. Necessity may intervene. For example some transsexuals engage in prostitution to find money to pay for the gender reassignment they seek. However this goal of gender reassignment is almost always to enable people to be themselves. Sex may not even be on the list. Lesbian and gay people seek partners of the same sex but pursue equivalent goals. Since the drive is not for action but for the fulfilment of identity it is possible to be involved in an active homosexual relationship in the total absence of sex. As with transsexuality the fulfilment of these relationships are to allow people to be themselves. Other people are bisexual, and the boundaries between heterosexual and homosexual behaviour are not clearly defined. These boundaries can vary with time and no single type of behaviour is exclusive to any group.

The processes which are involved in the development of gender identity are just one example of a generally applicable process. Therefore the same outcomes may be expected when other elements of personality and identity are considered. This is a radical approach. It shows that the development of personality and identity is stimulated by clashes between the contagious internally generated physiological forces of imitation, possession and acquisition acting against the moderating influences created by the cognitive qualities of remembering, reasoning, perception, intuition and control. The balance between these is largely set by the end of three years and this is before conscious awareness exists. As a consequence only those issues which remain unresolved will intrude on the conscious mind. That is most obviously seen in the case of gender identification. When this proceeds as expected no evidence of these conflicts are found. However if there is a clash between the core gender identity and the identity which the cognitive development processes would create, severe trauma can occur.

### **1:5: Disappearance**

This disappearance may be one reason why these underlying neurophysiological development processes fail to be recognised in standard psychiatry and psychology. Another reason may come from the social attitudes which have been created by the centuries of scapegoating and condemnation of all gender and sexually variant behaviour by the Christian Church. The conflicts that people are aware of come from their attempts to rationalise and deal with the discordances that have already been formed. This disappearance may also be why the presumption is made that the cognitive processes guide the development of personality and identity at all times of life.

### **2:0: Initial Formation**

Previous attempts to explain the origins of homosexuality and transsexuality using social learning theories have not met with success. In the introduction it is shown that this is because of the limitations of the theories and because no causal inputs can be found. Therefore the presently accepted theories argue that the creation of these conditions is due to the effect of hormones on the foetus which causes sexual differentiation to develop in the brain. In gender dysphoria this process creates a brain structure opposite to the physical sex; therefore according to this argument a genetic cause is expected. However some form of psychological process is needed to transform physiological attributes into identity and thought.

The research in this paper draws on previous investigations into infant neurophysiology. It combines the results of these with the psychological work of René Girard: Girard identifies a process of development which also begins in infancy. However the analysis he presents is carried forward into

interpretations of adult behaviour. Therefore as well as creating a better understanding of infant responses, his work offers a model of development which can bridge the gap between neurophysiology on the one hand and psychiatry on the other. The experience the author has gained by using this approach in tribal conflict situations provides a valuable resource.

Girard used his observations of the behaviour of very young children to put forward a theory of infant development where the process is driven by the need to seek what another infant possesses. This is for possession in its own right. It is not possession for any purpose it may serve<sup>35</sup>. Girard defined this type of possessive imitation as mimesis. He called the behaviour mimetic desire. This is a self reinforcing process where each feature builds on the preceding one. Girard also showed that the driving forces behind this process are so strong that any awareness of an individual incident or the thought that triggers it loses significance, and any awareness of it often becomes lost. Girard observed that people borrow their desires from others; they do not identify them for themselves. This means that, far from being autonomous, the desire for a certain possession is always provoked by the desire of another for that same possession. The consequence of this is that there is always a triangular relationship between the self, the other and the other's desire. The very act of desiring what the other wants or possesses leads to rivalry and strife, and if two others desire the same possession, there will soon be a third, then a fourth. Since the desire of the self is aroused by the desire of the other (and not by the object to possess) the original cause is soon forgotten. When this happens the dynamics take over and the conflict becomes driven by rivalry instead. Co-operation does take place when there are advantages to be gained but when rivalry occurs, the rivals deliberately create obstacles which deny their opponents access to that possession. They also develop strategies which are intended to give exclusive access for themselves. The greater the intensity of the drive, the smaller the trigger required. Once the desire for a possession has been established the direction it takes becomes very difficult to change. Indeed mimesis can often be perverse for it may regard genuine corrections that should be made as obstacles to be overcome, which then further increases the strength of the drive. External influences are the only means of ensuring that the drive is correct and the ability of a young baby to understand the influences of these is very limited indeed. Girard correctly identifies the driving mechanisms. However his detailed description of how they work requires the presence of cognitive abilities. Therefore there are limitations on how early that detailed description can be applied.

Dawkins and others identify a different form of mechanism which is innate and operates from birth. In 1976 Dawkins defined the Meme as single strand of thought which competes with others in the mind in order to achieve superiority<sup>36</sup>. In doing so he was making an analogy with the actions of genes in genetics. The process which Dawkins presents predicts a similar power and contagion to that which Girard describes. Dawkins was careful to define the meme as a replicator only and the type of behaviour arising from this he called memetic behaviour. He argued that imitation and contagion in the broad sense are the ways in which such memes can replicate. Just as not all genes that can replicate do so successfully, so some memes are more successful in the meme-pool than others. Individual strands will combine together to form memeplexes, which give the concepts of self and identity each person possesses. Selection favours memes that exploit their cultural environment to their own advantage. Heylightens and Chielens<sup>37</sup> give an overall review of the topic. Dawkins does not appear to refer to Girard's work, and his independent definition of the term memetic to describe the broadly equivalent mimetic processes that Girard describes does not suggest an inclusive approach.

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<sup>35</sup> Girard: (1961), Girard (1972), Girard (1978)

<sup>36</sup> Dawkins. (1976) Chapter 11 The Selfish Gene

<sup>37</sup> Heylightens and Chielens: (2009)

The discovery of mirror neurons took studies to a new level. Current research on brain physiology has identified the role that they play in processes of imitation where exactly the same neurons fire in an observer as those which fire in the person who is actually undertaking the process or act. It has also been shown that these processes of possessive imitation are closely intertwined with the issues of social identification and recognition<sup>38</sup>. The resonating response of mirror neurons within both the doer and the observer implies that the ability to separate action from response is an essential requirement for learning to be achieved. This in turn differentiates the self from the other and the capacity to achieve it must be present from the beginning of life. Research further indicates that action understanding may be primarily based on the motor cognition that underpins one's own capacity to act<sup>39</sup>. Experimental studies have also shown that emotions and sensations appear to be mapped to the same resonance mechanisms that are involved in dealing with action<sup>40</sup>. Imitation is therefore built into physiology and the foremost challenge to be explained is not about how learning develops but about how the observer can inhibit this imitative process so that he or she does not respond by actually engaging in the same process or act.

## 2:1: Neural Development Processes

The techniques of developmental cognitive neuroscience aim to interpret how the physical development of the brain relates to the huge postnatal changes in cognitive and psychological abilities that are witnessed from the newly born infant to adolescence. These have helped to reveal that postnatal brain development is a dynamic and plastic process in which many emerging functions are shaped by the physical and social environment of the developing child. The creation of these links extends to developing the physical structure of the brain. Indeed children help to further their own brain development by actively seeking out novel and important types of information from their environment. The specific part of the cortex that has been associated with higher cognitive functions such as inhibition, working memory and planning is the prefrontal cortex<sup>41 42</sup>. The traditional interpretation has been that this region is silent over the first year of life, and that it only becomes functional in stages beginning at around 12 months. However current research has shown that the region is active from at least the first few months after birth and that the functions that it supports get more advanced as childhood proceeds.<sup>43</sup> Nevertheless babies enter the world with a still-primitive cerebral cortex. At birth, only the lower portions of the nervous system (the spinal cord and brain stem) are very well developed, whereas the higher regions (the limbic system and cerebral cortex) are still rather primitive. Development of the cerebral cortex begins in the primary motor and sensory areas, these are regions which receive the first input from the eyes, ears, nose, skin, and mouth. It then progresses to "higher-order," or association regions that control the more complex integration of perception, thoughts, memories, and feelings. Different parts of the cortex develop at different rates. The patterns of synaptic production and pruning correspond remarkably well to children's overall brain activity and those associated with visual and auditory processing reach their peak at around six months but those associated with the orchestration of thoughts do not reach their peak until around two to three years. It is the gradual maturation of this complex part of the brain that explains much of the emotional and cognitive maturation in the first few years of life.

This gradual development of cognition poses something of a paradox. These issues are still hotly debated<sup>44</sup> but it is argued that there may be developmental reasons for the delay.<sup>45</sup> The newborn

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<sup>38</sup> Hanneth. (2005).

<sup>39</sup> Gallese, Rochat and Cossu: (2009)

<sup>40</sup> Gallese. (2009).

<sup>41</sup> Teffer, Kate; Semendeferi, Katerina.(2012)

<sup>42</sup> Diamond, A (2002)

<sup>43</sup> Johnson, M.H. (2005).

<sup>44</sup> Goswami, Usha. (2008).

infant has to acquire a vast range of skills that seem mundane to adults. For example, learning to use vision and feedback to successfully reach for and grasp an object takes several months of failed attempts and near misses. Therefore at the early stage of life priority has to be given to the acquisition of such skills, attitudes and thoughts, and the requirement to analyse them would be a diversion from that task. It is well known that babies have an enormous capacity to learn from the first days and stimulation through the attention of others plays a fundamental part in encouraging the process. The short attention span of babies ensures that they quickly move on to other things. That learning synchronises with the parts of the prefrontal cortex which are most active at the time, and the capability to learn in these areas is much greater than that which is left behind in later life.

It can therefore be an advantage for the part of the frontal cortex dealing with the higher emotions to be inactive during this period. It means that information gathered is fragmentary in nature but it forms the base on which future development can take place. The potential influence of this on personality development is discussed in an early paper by Allen Schore<sup>46</sup>. It has also been shown that the prolonged developmental plasticity in the associative frontal cortex in human allows an unprecedented opportunity for acquisition of the highest level of cognitive abilities<sup>47</sup>. However the authors also indicate that this delay makes it is susceptible to the formation of abnormal circuitry which is manifested in late-expressed neuropsychiatric disorders. There are advantages and disadvantages to late development and considerable attention is now being paid to the neuroscience of the adolescent brain<sup>48 49</sup>. The overpowering drive to acquire identity through the pursuit of possessive imitation in infancy has been well demonstrated by Girard, Dawkins and others but, without the monitoring by the higher level functions of the prefrontal cortex being available at the time, there is limited control on the direction that this development may take. This is good for individuality but it gives potential for errors to occur. Without access to these higher functions the nature of learning is also specific. During their first year babies respond very well to direct stimulation, however observational learning seems to have little effect. Those expectations of rearing which depend on communicating an awareness of these higher level functions cannot be absorbed. This means that they will have little impact on their lives before these functions are developed.

Although Girard correctly identifies the driving forces of possessive imitation to be innate and present from birth his detailed description of how they work requires cognitive abilities to be present. This description can be used with considerable success in later life but it cannot be used during early development at the time when these cognitive abilities are absent<sup>50</sup>. Therefore the drives for possessive imitation, which Girard describes, are empowered by the innate physiological driving forces identified by Gallese and others. Girard argues that mimetic desire starts as the desire to be the other and the desire to take possession of what the other desires is a derivative of that drive<sup>51</sup>. At birth both self and the other are co constituted as a single entity, and this understanding is in line both with Girard's perception and more recent research. In his examination of Girard's work Gallese suggests that an alternative form of we-centred mimesis takes place very early in life before any separation of the self from the other is made<sup>52</sup>. This separation of the self from the other is a crucial issue and a more detailed consideration is needed about how this takes place.

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<sup>45</sup> Johnson, M.H. (2009).

<sup>46</sup> Schore, A.N.(2001),

<sup>47</sup> Petanjeka, Zdravko; Judaša, Miloš; Šimića, Goran; Rašina, Mladen Roko; Uylingsd, Harry B. M.; Rakicb, Pasko; Kostovića, Ivica. (2011).

<sup>48</sup> Blakemore S.J (2012).

<sup>49</sup> Sebastian C, Burnett S, Blakemore S.J.(2008)

<sup>50</sup> The author has been involved in this work when it is applied to tribal conflict situations

<sup>51</sup> Girard. (1965)

<sup>52</sup> Gallese: (2009).

Various analogies have been used to describe the development processes. These are described later in this account. An analogy involving the coalescence of bubbles has been used to describe a way in which mimetic development takes place. Each concept or thought can be represented by a mimetic bubble. The bubble is empty inside but the elemental concept it explores is represented by the membrane that is created. When a bubble pops or coalesces nothing is left behind except the experience gained in creating it – and this in turn allows bubbles representing more complex concepts to form later on. Intriguingly models of mimetic bubbles are used more frequently to examine speculative behaviour in the stock market today. This is a contagious process which is relatively immune to external intervention. It can be regarded as a feedforward process where even small triggers may lead to a runaway drive. That on its own would lead to anarchy and some form of feedback system is needed to hold it in check. From the neurophysiological transformation period onwards the traditional psychodynamic and social learning theories can start to be used. However they can only act on overlays on what has already been created and for a complete understanding of how personality and self-identity is created the impact of these internally directed, contagious and feed-forward processes of early development must be fully understood.

### **3:0: Tribal and Collective Identities**

This study also suggests that the concept of self is multifaceted. Therefore collective as well as individual concepts of self are formed, where the dynamics of the group resonate as a single organism as well as within individuals alone. These collective concepts of self arise through being part of a group, part of a family, or part of a tribe, and the part which makes up the identification of the personal self may be much smaller than expected. Gallese argues that self-individualisation arises from the necessity of disentangling the self from the original we-centric dimension in which it is constitutively embedded from the beginning of life<sup>53</sup>. This mutuality is most obviously revealed when it is observed that the theories of identity development which are applied to groups of people can also be applied to the workings within each individual mind. In group situations which involve tribal conflict the validity of his approach has been well tested, and the theories of Girard fit into this category, see for example (Wright 1987) (Morrow 1995) (Zurawski 2002)<sup>54</sup>. This is why intra-personal experiences associated with gender identity and inter-personal experiences associated with tribal identity can both be used to validate the same process. In new born infants the initial differentiation which eventually leads to the adoption of a gender identity may begin with the tribal association of people with like mind.

### **4:0: Cognition and Theory of Mind**

It has been indicated that a major neurological transformation rapidly occurs around the age of two years when the pre-frontal cortex of the brain begins to function as an integrated unit. There is a rapid increase in reasoning and learning capabilities during this transformation period. Before that time it is shown that development takes place in a fragmented way. This is dominated by the internally generated physiological driving forces in a contagious feed-forward drive which maximises the information gained but with the lack of cognition, little order and control is applied. Cognitive abilities develop from the neurophysiological transformation period onwards, when the brain is more

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<sup>53</sup> Gallese (2001, 2003, 2009).

<sup>54</sup> Wright (1987), Morrow (1995), Zurawski (2002)

able to use the feed-back processes of order and control through its increased ability to function as a co-ordinated unit.

Cognitive ability is defined as the capacity to perform higher mental processes of reasoning, remembering, understanding, and problem solving. This requires the ability to work with information in a meaningful way, to apply new information to that which has already been gained, perform preferential changes, use reasoned procedures to alter opinions, and to search for rewards. In the cognitive continuum theory, intuition and rational analysis are defined as two modes of cognition or recognition that can be placed at the ends of a continuum. Intuition refers to rapid, unconscious processing and low control, and analysis refers to slow, rational, conscious and controlled thinking.

A child is said to possess a "Theory of Mind" when he or she has developed the ability to attribute mental states, beliefs, intents, desires, pretending, knowledge, etc., to oneself and others and to understand that others have beliefs, desires and intentions that are different from one's own. This requires a degree of separation which enables an individual to mentally stand apart and examine his or her thought processes as if from afar. It does not come properly into effect until about the age of four years. The results of this investigation suggest that it also marks the move from unconscious to conscious thought<sup>55</sup>. It requires the ability to manage time in a coherent manner so that considered decisions can be made which are based on the analysis of cause and effect. Without this facility early memories are likely to be seen as snapshots of particular events, and these snapshots may resource the initial intuitive and automatic response.

Neuroscience has rightly concentrated on examining the inhibitory and other mechanisms that must be provided if learning capability is to develop, but the need for this separation is an outcome of the inbuilt physiologically based driving forces which empower the process rather than the process itself. Pridmore (2011)<sup>56</sup> notes that Theory of Mind skills are recently evolved and they are finely tuned. They depend on a high degree of biological, psychological and sociological integration. Finely balanced systems are easily to disrupt, and he argues that it would be reasonable to expect some psychiatric disorders to be underpinned by disruption to the Theory of Mind. While researchers may be more interested in the consequences of disruption, the potential for growth by pursuing adventures, individuality and character formation must also be considered. These provide the counterbalance for the difficulties that are found.

## 5:0: Neurology and Learning

### 5:1: Quorum Sensing and Delayed Imitation

For learning to have an impact over the long-term infants must be able to encode and store the information they receive and be able to retrieve it for use at a later date. Studies on deferred imitation have shown that by at most 6 months of age, human infants are capable of these comparatively advanced temporal abilities (see for example Mundkur (2005)<sup>57</sup>. Throughout early development there are dramatic changes which apply both to the length of time over which information can be retained, and the ability of infants to retrieve and express their memories of it in a flexible manner<sup>58</sup>. Each neuron in the brain may have hundreds, if not thousands of synapses or

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<sup>55</sup> See footnote 19

<sup>56</sup> Pridmore S. (2011).

<sup>57</sup> Mundkur. (2005)

<sup>58</sup> Jones and Herbert (2009).

which are connected to other neurons and a neuron will only fire if a certain number of these are activated at any one time. This number is described as the quorum that must be reached<sup>59</sup>. A similar method of operation seems to be applied when individual concepts are linked<sup>60</sup>. When the value lies below the quorum little or no action is taken, but once it reaches or exceeds the quorum there can be a rapid response. The numbers of connections required for the quorum is not fixed but depends on the intensity of the need.

The same types of quorum sensing methods are used for creating a sense of self identity in cooperating communities of independent organisms, such as ants and bacteria<sup>61</sup>. In this case chemical and/or social signals are used and the relationships between self and group identity from bacteria to humans are discussed in a book by Villarreal<sup>62</sup>. The absence of a discrete boundary between interpersonal and intrapersonal elements has major implications for the concept of what constitutes self identity. It is also this understanding of the continuity between self identity and group identity which allows the conflicts associated with tribal identity and those associated with gender dysphoria to be compared.

## 5:2 Intention and Perception

The need to foster individuality requires a process which maximises the mimetic process and provides the minimum of control. This will vary with time. The pace of this change is determined by the development of processes of cognitive or directed thought and the development of their Theory of Mind. In early infancy where the acquisition of concepts and the development of individuality are of primary importance the mimetic process may be relatively unrestrained but as the child grows older more control will be required. The un-coordinated parallel<sup>63</sup> thought processes which dominate this initial learning period allow elements to be effectively absorbed. However the ability to discriminate between these processes demands the development of a serial processing of thought. It is shown that this serial process is needed for identifying the passage of time and developing the awareness of cause and effect<sup>64</sup>. The timing is crucial and a major flowering in a child's cognitive abilities appears to take place at around the age of two years. Baron-Cohen identified the infant's understanding of attention in others, a social skill found by 7 to 9 months of age, as a "critical precursor" to the development of theory of mind<sup>65</sup>. The understanding of other people's intentions is a second precursor and this is found in children between the ages of two and three years. This "intentional stance" has been defined by Dennett<sup>66</sup> as an understanding that others' actions are goal-directed and arise from particular beliefs or desires. However it is not until the age of four years that children obtain the ability to understand the implications of false belief. Many research investigations into false belief tasks have been undertaken. These all agree that it is not obtained until the age of four years. This is the key stage from which infants start to turn their awareness of

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<sup>59</sup> Malsburg (2010)

<sup>60</sup> A great deal of research has been undertaken on Neural Networks and Artificial Intelligence. For an example, see Cohen, O., Keselman, A., Moses, E., Rodriguez Martinez, M., Soriano, J., and Tlusty, T. (2010).

<sup>61</sup> Jacob, Eshel Ben; Becker, Israella; Shapira, Yoash and Levine, Herbert. (2004)

<sup>62</sup> Villarreal, L.P. (2009)

<sup>63</sup> The descriptions of serial and parallel thought are used here in preference to other terms to distinguish between the two information processing methods. The term directed thought is sometimes used in this article to describe goal centred activities. Cognition refers to mental processes which include attention, remembering, producing and understanding language, solving problems, and making decisions. It refers to a faculty for the processing of information, applying knowledge, and changing preferences. Cognition, or cognitive processes, can be natural or artificial, conscious or unconscious. Cognitive thought may also be regarded as serial thought. However by using the words serial or parallel in this article to describe the two different types of thought processes it is being made clear that the discussion is confined to the mechanics of processing alone.

<sup>64</sup> Consciousness studies are beyond the scope of this article

<sup>65</sup> Baron-Cohen, S. (2003, 2013)

<sup>66</sup> Dennett, D. (1987).

ideas and intentions into their own conscious interpretation of thought. From this age infants begin to be able to use recursion to mentally stand outside themselves, so that they may test the validity of our own ideas. Significantly this is the age at which many transsexuals first become aware that there is something wrong with the sense of gender identity that they are expected to possess.

### 5:3: Conflict Types

This investigation has shown that initial development is dominated by internally generated and physiological forces which act in a feed-forward manner to maximise the amount of information that is obtained. During the second to the fourth year the feed-back forces created through the development of cognitive abilities increasingly apply moderation and control. This means that two separate differently directed and potentially conflicting developmental processes are involved. The strength and contagion of the driving forces means that conflicts will almost inevitably occur. Those conflicts which arise from discords before the neurophysiological transformation period are found to have different characteristics from those which form after it. The first of these can be considered to be driven by the drive for possession and the second by the desire for reward.

In section 2:0 it is shown that, through competition with others, babies learn to separate the concepts and strategies which produce benefits and rewards from those which do not. These thought processes are also facilitated by Hebbian Learning<sup>67</sup>, which means that learning specific neural networks become physically established in the brain. The major change occurs around the age of two years when a flowering of cognitive ability occurs. The creation of this enables the development of processes of directed and cognitive thought, through which imagination, play association and future actions can be applied.

Success in competition during infancy may bring an immediate reward. However, if this is to be part of a learning process, it must be turned into a goal; and the development of delayed imitation has been an important feature in studies of early development<sup>68</sup>. In this a baby repeats an action observed in others, but only after a time lapse has occurred. For that to happen there has to be a sense of time, and some awareness of cause and effect. Although this provides a temporal continuity it is also necessary to link the concepts together so that an elementary concept of self can form. The flowering of cognitive ability takes place around the age of two years. This delay in cognitive development and the rapid transformation which takes place afterwards<sup>69</sup> has a marked effect on the overall dynamics. It means that later developing conflicts which originate from sources after the neurophysiological transformation period can be goal directed but those which develop at an earlier stage are driven by rejection alone<sup>70</sup>.

Timing is crucial, and in infancy a major turning point comes when the desire for possession includes the desire for reward. Conflicts which originated before this occurs are called identity driven conflicts in this analysis. These can only be managed using inclusion and transcendence. Later

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<sup>67</sup> Hebbian Learning describes a mechanism involved in the operation of neural networks. Broadly it states that those connections which are most used grow stronger, while those which are less well used die back. It involves the use of mathematical principles to determine the weighting that is given to each element. Today, the term *Hebbian learning* generally refers to some form of mathematical abstraction of the original principle proposed by Hebb. In this sense, Hebbian learning involves weights between learning nodes being adjusted so that each weight better represents the relationship between the nodes. These change with time according to use. Many learning methods can be considered to be somewhat Hebbian in nature..

<sup>68</sup> See for example Mundkur (2005)

<sup>69</sup> See section 2:1 of this document

<sup>70</sup> See section 12:2 of this document



methods of control using willpower and mediation are only available for conflicts which develop after this point. These are here called reward driven conflicts.

#### 5:4: Conflict Dynamics

In each type of conflict different characteristics are found. From birth and during early infancy the resonance of mirror neurons creates a drive for possession in its own right, and this process continues throughout life. However early conflicts are mainly concerned with the need for acquisition, empathy and the rejection of what is wrong. Therefore it is argued that concepts initially develop independently through streams of unlinked parallel thought. Because conflicts which have their origins at this time are not goal directed they can be characterised as a search for identity. Their focus is not on behaviour. They can also be distinguished by the contradiction between the extremes of the trauma which they create, and the modesty of their demands.

The same focus on identity rather than action means that behaviour and the goal may not be directly related. The unconscious goal may be different to the conscious goal that is sought. Usually the identification of a goal comes from attempts to rationalise the discordances that have already been created, at a later time. In the case of gender dysphoria the discordances had already been fixed in place about a year before children could be aware that this had occurred. The use of willpower and mediation to fight such conflicts does not succeed because there is no means for removing the underlying discord, or by using a scapegoat as a means of transferring the blame<sup>71</sup>. The more these techniques are used to suppress the search for identity the stronger the conflict becomes. Methods of management must use inclusion and transcendence instead.

It is often assumed that willpower and mediation should be able to solve these conflicts but this is not always so. In circumstances where those approaches fail, a scapegoat may be sought. Girard shows how scapegoating occurs and the mechanisms that are employed. His approach has been extensively tested and validated in conflict situations. A brief description of how Girard understands the nature of desire has also been given earlier in this document<sup>72</sup>. In identity driven conflicts the dynamics take over: the original causes are forgotten, they may no longer be relevant or they may be lost in the mists of time. Other symbols are developed which are then identified as the causes of the conflict. These may refer to past history but their meaning is for the present day. The more severe a conflict becomes the more the rivalry between the two sides makes each opponent more and more like the other, and they pursue increasingly similar goals. The conflict grows with increasing intensity until a scapegoat is found. This is used as the sacrifice that bears the blame from both sides. The scapegoat can wield enormous power since the resolution which is brought about by the sacrifice of the scapegoat reveals how alike both sides are and how much in common they share.

If this process always succeeded there would be no violence but when it does not extreme conflict can be created. Nevertheless the understanding that has been developed allows more effective reconciliation programmes to be put in place. The fact that these strategies are needed at all also delivers an important lesson, for the primary drive of possessive imitation remains just as strong throughout life, and it has been shown that in all ages of society and between tribes and between people that strategies which make use of rituals, religious belief, transference and scapegoating must be used to ensure that social cohesion is maintained.

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<sup>71</sup> See also section 11:3 of this document

<sup>72</sup> See sections 1:4 and 9:0 of this document

## 5:5: Gender Reassignment

It is not surprising that many transgender people attempt to use similar processes. In section 12:4 it is shown that, for transvestites, this may meet with some success. However transsexuals seek to eject the core gender identity which is one of the foundations of the selfhood that they possess. There is the need for the transference of blame. It is argued here that a scapegoat is created, but this is the genitals transsexuals are born with. This scapegoat can indeed be ejected, but that is through genital surgery and through the gender reassignment that results. This is why this process should never be denied for the people who need to seek it, because it resolves the trauma at source. Life however is not always so simple. For some people seeking gender reassignment means swapping one set of problems for another, for the things that are most cherished in the life they have built may be destroyed by such action. Therefore people who do not want to take the path to gender reassignment must find ways of dealing with the conflicts that gender dysphoria creates. That is extensively discussed in section 13 of this document and in a separate paper<sup>73</sup>. However these approaches will only succeed if total commitment is given and the correct management methods are put in place.

## 5:6: Libido and Mortido

When strategies, such as scapegoating fail, it is shown that compulsion occurs. This can have a positive or negative output. The concept of compulsions of libido and mortido are discussed in more detail later in this paper<sup>74</sup>. In transgender situations the compulsion encountered is one which is searching for the fulfilment of life and when it happens the emotional drives have overwhelmed the rational disciplines that attempted to control it. This is regarded as a compulsion of libido. However other compulsions have a totally negative outcome. For the most part compulsions of libido can be seen as fulfilling the desires of everyday life. They only appear as compulsions when complications occur or their fulfilment is denied. This raises issues about the balances and interactions between conscious, unconscious and compulsive behaviour in the way that people live their lives.

## 5:7: Brain Plasticity

The large degree of brain plasticity during the first three years of life causes synapses to develop in a way which reinforces the most active brain activities. The view that these processes result from Hebbian learning has latterly been given strong empirical support. Hebbian learning theory describes a mechanism for synaptic plasticity where an increase in synaptic efficacy arises from the presynaptic cell's repeated and persistent stimulation of the postsynaptic cell. This facilitates or inhibits signal transmission and the greater the stimulation the stronger the link becomes. Del Giudice, Manera and Keyzers suggest that the infant's perceptual-motor system is optimized to provide the brain with the correct input for Hebbian learning, thus facilitating the association between the perception of actions and their corresponding motor programmes<sup>75</sup>. It is also age dependent and there are sensitive times during which it can most effectively take place (for a review see Michel and Tyler 2005)<sup>76</sup>. For example in the visual cortex there is ten-fold growth in the number of synapses between the ages of zero and six months, leading to a sharp decrease starting at twelve months and a slower decrease from the age of two years. These periods differ with developing function and affect both learning and physical development<sup>77</sup> In the human prefrontal

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<sup>73</sup> Gilchrist, S. (2013): "*Management Techniques for Gender Dysphoria with particular reference to Transsexuality*": <http://www.tgdr.co.uk/documents/205P-ManagementTechniquesInGenderDysphoria.pdf>

<sup>74</sup> For further discussion on compulsions of libido and mortido see sections 10:6 and 12:3 of this document

<sup>75</sup> Del Giudice, Manera and Keyzers (2009)

<sup>76</sup> For a review see Michel and Tyler (2005)

<sup>77</sup> Thomas and Johnson (2008).

cortex the development is slower with the number of synapses reaching a peak which is about 1.5 times the adult number between the ages of two and three years. This brain region has been implicated in planning complex cognitive behaviour, personality expression, decision making and moderating social behaviour. The basic activity of this brain region is considered to be orchestration of thoughts and actions in accordance with internal goals. Mirror neurons have now been shown to be involved in every aspect of life and their impact on the totality of the neural network which each person creates must also be profound. The shape of the network will be unique to every individual. It is suggested that the response of this network to any form of stimulation is also the way in which individuality is expressed.

Another way of measuring brain development is to look at the speed of neural processing. A newborn's brain works considerably more slowly than an adult's, transmitting information some sixteen times less efficiently. The speed of neural processing increases dramatically during infancy and childhood, reaching its maximum at about age fifteen. Most of this increase is due to the gradual myelination of nerve cell axons (the long "wires" that connect one neuron to another neuron's dendrites.) Myelin is a very dense, fatty substance that insulates axons much like the plastic sheath on a power cable, increasing the speed of electrical transmission and preventing cross-talk between adjacent nerve fibres. Myelination (the coating or covering of axons with myelin) begins around birth and is most rapid in the first two years but continues perhaps as late as 30 years of age.

### **5:8: Tuning**

It is demonstrated that brain plasticity (which is the ability of the brain to physically reshape itself), is structured to maximise the amount of information that can be collected during the period before the neural transformation, when it is most needed, and later to ensure that a constancy of personality is formed<sup>78</sup>. It is demonstrated that the physiological, neurological and psychological aspects of brain development act together to form a finely tuned system in which the maximum amount of individuality, possessiveness, intelligence and inquisitiveness, together with the minimum degree of energy expenditure is generated.

### **5:9: Sex Differences**

Electrical measurements reveal differences in boys' and girls' brain function from the moment of birth. By three months of age, boys' and girls' brains respond differently to the sound of human speech. Because they appear so early in life, such differences are presumably a product of sex-related genes or hormones. It is known that testosterone levels rise in male foetuses as early as seven weeks of gestation, and that testosterone affects the growth and survival of neurons in many parts of the brain. Female sex hormones may also play a role in shaping brain development, but their function is currently not well understood.

Sex differences in the brain are reflected in the somewhat different developmental timetables of girls and boys. By most measures of sensory and cognitive development, girls are slightly more advanced: vision, hearing, memory, smell, and touch are all more acute in female than male infants. Girl babies also tend to be somewhat more socially-attuned, responding more readily to human

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<sup>78</sup> Since this document was written much more evidence for the "Domestication of the Brain" and for the neurological processes involved in establishing this constancy has become available. For an account of this see: Gilchrist, S. (2016): "A New Approach to Identity and Personality Formation in Early Life": <http://www.tgdr.co.uk/documents/218P-InfluencesPersonality.pdf>

voices or faces, or crying more vigorously in response to another infant's cry, and they generally lead boys in the emergence of fine motor and language skills.

Sexual differentiation in the brain begins well before birth, and normal patterns of development are along female lines. Between the 6th and 12th week, testosterone and its derivatives accomplish the masculinisation. Animal experiments have shown that the administration of the appropriate hormones at a particular period in the development of the foetal brain can trigger development in the male direction but this is also time dependent and the administration of hormones at other times has no effect. The consequence of this is that male and female babies at birth will have different perspectives depending on whether or not testosterone has had the required result. Experiments with babies just a few days old show sex related differences in behaviour as measured by factors such as the ability to hold the length of a gaze. This difference is not expressed in gender terms but as a tribal association which has the potential to influence the direction of the development processes that will follow in later life.

## 6:0: Developmental Stages

### 6:1: Model

An analogy sometimes used by the author compares an acorn to its cradle. The cradle represents the early global concepts which identify the place of the person in society, while the acorn represents the sense and the awareness of the personal and individual identity which is later formed. The transformation from a single type of awareness into one which includes the other is delayed until the necessary neural co-ordination has developed<sup>79</sup>. This means that a collective and tribal identity is created before any concepts which distinguish the personal self from the other can be formed.

Although the cradle supports the acorn, each component has different characteristics. In reality the acorn eventually leaves the cradle; but the acorn's characteristics depend on the type of nurture the cradle has supplied. In this analogy the acorn and the cradle remain connected, however instead of separating, the acorn may represent the conscious awareness, while the early cradle elements are confined to the unconscious mind<sup>80</sup>. It is argued in this analysis that the physiology of brain development is such that these cradle based elemental global or core concepts remain fixed for the rest of life. Cognitive development may suppress or override their demands. However their constancy is shown to create a stability of personality whereby two people can continue to recognise each other even if they have spent years apart

### 6:2: Résumé

All of the proponents of the neurophysiologically based development theories identify a common approach. In this, fragmented elements of individuality are at first formed in a disorganised way. These then compete and combine in such a manner that the more global concepts develop through the victories and coalescence of those elements which best succeed. Recent research suggests

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<sup>79</sup> In humans this delay is particularly long. Expert opinion disagrees but it is argued that an extended period is needed to allow the peak human potential to be created. A counter argument against this is that, the more it is delayed, the more it can go wrong.

<sup>80</sup> They may only come into conscious awareness when some conflict or trauma occurs.

that a quorum sensing mechanism is involved<sup>81</sup>. When that happens, a rapid transformation occurs. The components of identity and personality that then form are products of the momentum that has been created and not a logical choice.

It is shown that the development of learning capabilities and brain physiology are inevitably linked. Around the age of two years the rapid and wide-ranging transformation in neural capabilities takes place<sup>82</sup>. Up to this time the pre-frontal cortex of the brain remains in a relatively undeveloped state<sup>83</sup>. Neural activity, which was previously localised in nature, rapidly spreads. Distant areas of the brain become connected, and networks between the two hemispheres develop. There is an explosion in language abilities and cognitive capacity. For the first time the pre-frontal cortex of the brain can start to function as a single co-ordinating unit.

The great advances in brain capabilities which occur during the neural transformation period suggest that this is the time when key elements coalesce. Even those who have researched gender dysphoria using the social learning theories put the latest date by which the core gender identity has become irrevocably fixed as between the ages of two and three years. The close correlation between both of these events and the explosion in language capabilities has also been noted, and it has been suggested that all of these are directly linked<sup>84</sup>. This timing also ensures that the core sense of gender identity must have been formed before the cognitive activities become active. This means that it is formed by the inbuilt and internally focussed physiological driving forces acting alone. Therefore, instead of acting on a blank canvas, as has been assumed in traditional social learning and psychodynamic approaches, the later externally focussed cognitive development processes, together with their associated psychodynamic and social learning theories, can only act as overlays on what has already been formed.

### 6:3: Comparison

Almost any relevant textbook will describe in detail Freud's psychosexual development stages, and the stages Piaget identified in his social learning approach. Piaget defined the Sensory-Motor stage phase as lasting from birth to about the age of two years. During this stage, knowledge about objects and the ways that they can be manipulated is acquired: what the objects are and are for is irrelevant; more importance is placed on the baby being able to explore the object to see what can be done with it. Through the acquisition of information about self, the world and the people in it, the baby begins to understand how one thing can cause or affect another by creating its own schema that develop simple ideas about time and space. Freud defines his oral and anal stages as lasting from birth up to about the age of three years. The following phase, the phallic phase, is one where a baby has become able to separate an object from its immediate function and relate it to other purposes in the world. The ability to move on to the next phase is dependent on having been able to resolve the conflicts that the previous stage has created. Both Freud and Piaget associate all of these early developments with cognitive processing abilities and the possession of some elements of Theory of Mind. Girard, Freud, Piaget and others used cognitively based constructs to explain the characteristics encountered in early development. The social constructs of the ego, superego and

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<sup>81</sup> The easiest explanation to give is to imagine a cloud of little elementary concepts which are randomly milling around. Once some particular focus can be sensed many of the little concepts rush to that scene. The trigger happens when the pathways of the brain link sufficiently together. These elementary core concepts, such as the core gender identity, are then able to form because of the coalescence that has occurred.

<sup>82</sup> The time when this occurs can vary widely between individuals. Two years is taken here as a median value but for some children this rapid transformation can occur much earlier within the second year of life.

<sup>83</sup> This is the part of the brain which controls intuition, perception and organised thought.

<sup>84</sup> See section 5:7 of this document. This has been reported on by Money and others. For a general consideration of brain plasticity and language see: Kolb, B. And Gibb, R. (2011);

id, for example, may be considered as artefacts which try to explain in rational terms how the brain works, and what has happened in early life. These are attempts at resolution in which the cognitive abilities are heavily employed and they match the experiences of children who use their cognitive abilities to try to rationalise and provide explanations for discordances that had previously occurred. It is shown in this investigation that the contagion of the internally generated development processes provides the driving forces behind the driving forces instead. For these reasons they constructs cannot be used in infancy but they provide very relevant models when they are applied to later life.

A problem with these theories is that neurophysiological research described in this study indicates that the pre-frontal cortex of the brain does not develop sufficiently to allow cognitive abilities to function effectively much before the age of two years. During this time a great deal can be learned by experience, but there can be little intellectual interpretation of the results. Vast amounts of neural processing and development takes place during this time however the lack of neural co-ordination means that little cross linking of thought takes place. That rapidly changes around the age of two years, when an explosion of cognitive ability occurs. Piaget and Freud's developmental stages respectively mark the start point and end points of key stages in the neurophysiological transformation process which is identified in this analysis. This is considered to begin at the median age of around two years, and the core elements of personality and identity are established from the age of three years. It is also of note that these psychodynamic and social learning theories predict their results by relying entirely on external stimuli for learning to develop. According to these theories babies react in active response to what is provided instead of driving the processes forward themselves through the internally generated contagious processes that are active from birth. Although many more modern theories have moved on from the theories espoused by Piaget and Freud, the principles still remain

## 7:0 Social Construction of Gender

Around 1966 developmental psychologists began to identify significant changes in how children think about gender which took place between the ages of 2 and 7 years. They noted that from around 3 years of age, children seek out masculine or feminine toys and activities and that from this age they develop strong stereotypes about gender and masculine or feminine behaviour and occupations. This stereotyping was believed to be because: "having highly structured notions of what boys and girls like and do helps them to make sense of the world around them". (See for example Banerjee: (2005): "*Gender Identity and the Development of Gender Roles*")<sup>85</sup>. Maccoby (2002)<sup>86</sup> also describes gender differentiation processes in group activities and group play of children from about three years of age.

Early researchers, such as Kohlberg, argued the confirmation of gender identity takes place at a relatively late stage. Berger (2005)<sup>87</sup> summarises this when he says: "Most research shows that children develop a significant sex role behaviour, not at the age of 4 (as suggested by Freud), but some years later". Kohlberg (1966)<sup>88 89</sup> argued, in line with Piaget's stages of cognitive development, that until the child has fully grasped the constancy of gender, one should not see very much sex-typed behaviour. According to these investigators children appear to be able to identify

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<sup>85</sup> Banerjee (2005)

<sup>86</sup> Maccoby (2002)

<sup>87</sup> Berger, Michael L (2005)

<sup>88</sup> Kohlberg, Lawrence (1966).

<sup>89</sup> Kohlberg, Lawrence (1969).

the external differences between a boy and a girl at 15-18 months, by 2 years they can place themselves as boy or girl. By 30-36 months they can correctly identify the sex of others on photos. The idea that people remain the same sex (constancy of gender) does not develop until about 4 years of age (Slaby & Frey 1975)<sup>90</sup>. Others argue for later dates: “Newly acquired gender knowledge is consolidated on a rigid either-or fashion, reaching its peak of rigidity between 5 and 7 years; later on, a phase of relative flexibility follows”: (Martin & Ruble 2004)<sup>91</sup>. Thus, the psycho-developmental grounds for gender-specific behaviour (not to mention the hormonal grounds are not laid before the age of 4, “and its expression, therefore, can only start thereafter”. According to the analyses by Berger and others, many experts believe that gender identity is pliable. Some think that before the age of approximately 18 months, babies do not self-identify as either boys or girls. Others think that gender identity remains flexible until puberty”

Modern analyses adopt the same principles. A typical description is as follows: “In these studies it is shown that, for young children, their initial concepts about gender are quite flexible. They do not begin to notice and to adopt gender-stereotyped behaviour until the age of two or three. A few years later, their concept of gender becomes quite rigid. Before the age of five, children do not seem to think that gender has any permanence. A pre-school child might ask his female teacher whether she was a boy or girl when she was little, or a little boy might say that he wants to grow up to be a mummy. Toddlers think that changing clothes will also change gender. It is not until children understand that boys have penises and girls have vaginas that they know that changing clothes does not change gender. Research suggests that children’s concept of gender develops gradually between the ages of three and five. Once children begin to think about gender as a stable trait, they also start to incorporate gender into their own identity. From around that time they become motivated to relate to other members of their group, and to seek out gender-related information, often becoming very strict about adhering to gender stereotypes. When they are between seven and ten years of age children become more relaxed about maintaining these gender stereotypes”.

The criticism of this from the viewpoint of this analysis is that they all expect cognitive abilities to be present and to guide the processes of learning and development at all times of life. What is described in these explanations is a process of self-discovery and self-awareness, which requires cognitive abilities to be present. These traditional development theories presume that the cognitive processes act on a blank canvas. That is shown to be incorrect in this investigation. Furthermore it demonstrates that these psychodynamic and social learning theories can only act as overlays on what has already been formed.

## 8:0: Gender Dysphoria

During the 1950s and 1960s, psychologists began studying atypical sexual development in young children, partially in an effort to understand the origins of homosexuality. This was extended to intersex and to gender variance. Early theories on gender development looked to a social learning process. In 1968 Robert Stoller published many of the findings in his book “Sex and Gender: On the Development of Masculinity and Femininity”<sup>92</sup>. Further contributions have been made by Green<sup>93</sup> and others. Behavioural psychologist John Money<sup>94</sup> was instrumental in the development of early

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<sup>90</sup> Slaby R.G. & KS Frey, K.S. (1975)

<sup>91</sup> Martin C.L. and Ruble D. (2004)

<sup>92</sup> Stoller, R. (1968, 1973), Green, R. (2010):.

<sup>93</sup> Green R and Money J (1969):. Green R (1974) Green R (1979)..

<sup>94</sup> Money, John: and Patricia Tucker. (1975): Money, John. (1986): Money, John. (1988): Money, John. (1994): Money, John. (1995).

theories of gender identity. In 1972 his ideas were published in the book "Man and Woman, Boy and Girl"<sup>95</sup>. However the reliability of Money's work has been challenged, most notably in the case of a set of identical twins where, because of an accident, a gender reassignment procedure carried out on one of the twins at the age of seven months. This was presented as a success: even though the subject was unhappy in the reassigned role. Eventually the twin reverted to the male role and sadly committed suicide later in life.

Green raises the issue of this John/Joan case which, he believes, the investigation of it does not treat neutrally. However, the reversion of Joan to John, in adolescence, is not unique in the literature. A six month old boy who suffered a traumatic loss of his penis, and was reassigned as female in 1981, refused hormone medication and requested reassignment as a boy in adolescence (Ochoa, 1998)<sup>96</sup>. Interestingly, the Ochoa study (involving seven children, 6 raised male) gives rise to the comment from the author, that 'sex reassignment will not be considered in future in patients with amputation of the penis or emasculation'. It is acknowledged that the decision to opt instead for penile repair is also influenced by the improvement in the relevant surgical techniques: (GIRES)<sup>97</sup>.

In a (much) earlier case remarkably similar to the first one, a boy was reassigned as a girl at 17 months of age. She, however, rejected her female identity at age 14 and began living life as a male. Dr William Reiner of Johns Hopkins Hospital commented about this case, "Despite everyone telling him constantly that he was a girl, and despite his being treated with female hormones, his brain knew he was a male. It refused to take on what it was being told." Usually these cases resulted as a consequence of intersex conditions where, in order to create genitalia which had as far as possible a normal appearance gender reassignment was performed immediately after or close to birth. It was assumed that social learning would ensure that babies would grow up as happy members of their assigned gender but it became very clear that this was not the case.

These results also challenge the conclusions regarding the late development of gender identity which attribute it to the action of cognitive learning alone. It was earlier noted that even those who have researched gender dysphoria using the social learning theories put the latest date by which the core gender identity in the sense of being who one is has become firmly and irrevocably fixed between the ages of two and three years<sup>98 99 100</sup>. This period of between two and three years is only an upper limit, and it is commonly argued the pre-disposing factors are present from before birth. The close correlation between emergence of the core gender identity the rapid advancement in brain capabilities during the neurophysiological transformation period and the explosion in language capabilities has also been noted, and it has been suggested that all of these are directly linked<sup>101</sup>. That directly leads to the conclusion that it is not the cognitive learning processes which are responsible for the creation of the core gender identity. This is formed by the internally driven and inbuilt physiological forces and their coalescence during the neurophysiological transformation period on their own.

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<sup>95</sup> Money, John, and Ehrhardt, Anke. (1996)

<sup>96</sup> Ochoa, B. (1998)

<sup>97</sup> GIRES: (2006, 2012)

<sup>98</sup> Stoller hypothesized that something like a "core gender identity" was established very early in life, possibly by age one or two. However, where Money had come to this conclusion merely by observation of his many "hermaphroditic" patients seen for gender-normalizing surgeries at Johns Hopkins University Hospital, Stoller felt he could use psychoanalytic theory to explain the actual process by which core gender identity was established. See: Peterson, Julian Gill

<sup>99</sup> Kalbfleisch, P.J and; Cody, M.J. (1995).

<sup>100</sup> A few authorities say it forms between ages 3-4 rather than precisely at age 3, e.g see: Bryjak, G.J. and Soraka,, M.P (1997)

<sup>101</sup> See footnote 84



These two encounters give very different perspectives. Nevertheless they complement each other, and no contradiction need be found. It is shown here that the unconscious core gender identity is created by the innate contagious and internally focussed forces which are present from birth. This defines the place an individual belongs to in society; and it is considered that a collective rather than an individual sense of identity is formed. The stability of this provides a secure base upon which future development can take place. The later outward focussed cognitive development processes advance and refine the conscious awareness and significance of the unconscious core gender identity. They also associate it directly with the individual sense of identity that is created. Here the social learning theories can have full effect by acting as overlays on what has already been formed. For a full understanding of the development of gender identity and personality, both of these processes must be considered together. Failure occurs when one of them is ignored.

## 8:1: Genetics and Intersex

The histories of conditions characterised by ambiguous genitalia in the new born, associated with genetic and hormone anomalies, or accidental neonatal damage, demonstrate that gender identity may resolve independently of genital appearance and the gender of rearing. (Diamond and Sigmundson, 1997<sup>102</sup>; Kipnis and Diamond, 1998<sup>103</sup>; Reiner, 2004<sup>104</sup>; Hines, 2004<sup>105</sup>; Dessens, 2005<sup>106</sup>). This supports the view that pre-natal sex hormones (and/or direct genetic effects, Dewing et.al. 2003)<sup>107</sup> have an indelible impact on brain development which may trigger an inconsistent gender identity that is resistant to social pressures.

Unusual genetic patterns have been found to be associated with male to female transsexuality (Henningson et al, 2005<sup>108</sup>; Hare et al, 2008<sup>109</sup>). Studies on twins and on other family co-occurrences of severe gender dysphoria, indicate that these are unlikely to be random, and the potential for a genetic link in a subset of these individuals is inferred (Green 2000<sup>110</sup>; Diamond and Hawk, 2003<sup>111</sup>). Certain chromosome disorders in those with male phenotype, are associated with a raised incidence of individuals who identify as women (Snaith et al., 1991<sup>112</sup>; Diamond and Watson, 2004<sup>113</sup>). Additionally, low androgen levels in an XY foetus associated with medication to the pregnant mother gives rise to a raised incidence of individuals identifying as women (Dessens et al., 1999)<sup>114</sup>.

Cerebral lateralisation of hearing in the non-transgender male and female populations is distinct and well-recorded. A recent study on dichotic hearing in transgender individuals found that transgender

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<sup>102</sup> Diamond, M and Sigmundson HK (1997).

<sup>103</sup> Kipnis K and Diamond M. (1998).

<sup>104</sup> Reiner, W.G. (2004)

<sup>105</sup> A very small minority of female individuals with congenital adrenal hyperplasia, who have been raised as girls, choose to live in adulthood as males (estimates range from about 1% to about 3%). Hines, M (2004)

<sup>106</sup> Dessens, AB, Froukje, ME, Slijper, FME, Stenvert, LS, Drop SLS (2005). Dessens found a much higher frequency of individuals within this group who identify comfortably as men: Of 250 raised as girls, 13(5.2%) experienced FtM gender dysphoria; of 33 raised as boys, 4 experienced MtF gender dysphoria; therefore, it appears that of the total 283, 42 individuals must be living comfortably as men or uncomfortably as women. These figures do not represent the whole XX, CAH population and, therefore, although interesting should be viewed with caution).

<sup>107</sup> Dewing, P, Shi, T, Horvath, S, Vilain, E (2003).

<sup>108</sup> Henningson, S., Westberg, L., Nilsson, S., Lundström, B., Ekselius, L., Bodlund, O., Lindstrom E., Hellstrand, M., Rosmond, R., Eriksson, E., Landén, M. (2005)..

<sup>109</sup> Hare, L, Bernard, P, Sanchez FJ, Baird PN, Vilain E, Kennedy T, Harley, VR. (2008).

<sup>110</sup> Green, R (2000)

<sup>111</sup> Diamond, M, Hawk, S.T. (2003)..

<sup>112</sup> Snaith, R.P, Penhale, S, Horsfield, P (1991).

<sup>113</sup> Diamond, M, Watson, LA (2004).

<sup>114</sup> Dessens, AB, Cohen-Kettenis, PT, Mellenbergh, GJ, van der Poll, NE, Koppe, JG, Boer, K (1999)..

women's dichotic hearing is significantly different from non-transgender males and, in fact, resembles the non-transgender female pattern (Govier et al., 2010<sup>115</sup>). The same study also confirmed previous studies that demonstrated a marked correlation with non-right-handedness in both transgender men and transgender women (Green and Young, 2001<sup>116</sup>; Zucker et al, 2001<sup>117</sup>). Post-mortem studies of small cohorts of transsexual individuals, in small areas of the brain known to be sex-dimorphic, have been shown to have the potential for neural differentiation in opposition to genital and gonadal characteristics (Zhou et al., 1995<sup>118</sup>; Kruijver et al., 2000<sup>119</sup>; Garcia-Falgueras and Swaab, 2008<sup>120</sup>). Scans of the white matter of the brains of untreated transgender men indicate that they have male neural patterns (Rametti et al, 2011<sup>121</sup>); transgender women's white matter is shown to be significantly different from both male and female controls (Rametti et al., 2010)<sup>122</sup>. Considered in the context of the other research cited above, these brain studies support the paradigm that the neurobiology of the brain is an important element in the development of transsexuality, (Zhou et al., 1995<sup>123</sup>; Kruijver et al., 2000<sup>124</sup>; Garcia-Falgueras and Swaab, 2008<sup>125</sup>). There are a large range of intersex conditions, some of which arise from genetic or hormonal abnormality, including those in which the body fails to respond to the changes that testosterone brings. Those who have this condition have male XY chromosomes but outwardly they develop as women, they think of themselves as women and are happy in this gender role.

## 8:2: Transgender

The cases which are most relevant to this study are those who because of physical malformation alone have had gender reassignment carried out at or close to birth. Such people are perfectly normal members of their sex in every other way. Cloacal extrophy for example is a condition in which the pelvic structures are abnormal and these have to be surgically corrected. Males with this condition were typically raised as girls with their genitalia reconstructed at birth or within the first months of life, to appear female. Normal policy was not to inform the children about their reassignment. Studies have indicated that a significant number of those treated in this way were not comfortable with their gender of rearing. One such study involved twenty-nine subjects all of whom had the normal complement of XY chromosomes. Five were raised male and continued to live as male, one individual dropped out and another died. Of the remaining twenty-two, who were reassigned female, thirteen declared themselves male, six of whom did so spontaneously and without birth status information. All of the individuals who were raised female showed moderate to marked male gender role preferences. The results of this study were published by Reiner and Gearhart in 2004<sup>126</sup>.

The consequence of these revelations led for a time to the cessation of all gender reassignment surgery. The outcome of this has been the development of carefully thought out guidelines which

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<sup>115</sup> Govier, E, Diamond, M, Wolowiec, T, Slade, C (2010). Dichotic listening, handedness, brain organisation and Transsexuality, *International Journal of Transgenderism*, 12(3) 144-154.

<sup>116</sup> Green, R and Young, R (2001)

<sup>117</sup> Zucker, K.J., Beaulieu, N., Bradley, S.J., Grimshaw, G.M., Wilcox, A. (2001)

<sup>118</sup> Zhou, J-N, Swaab, DF, Gooren, LJ, Hofman, MA (1995) A sex difference in the human brain and its relation to transsexuality. *Nature* 378:68-70. This evidence was cited by Professor Louis Gooren of the University Hospital, Vrije Universiteit of Amsterdam, in his affidavit to the court in *Bellinger v Bellinger*, TLR 22-11-2000.

<sup>119</sup> Kruijver, F.P.M, Zhou, J-N, Pool, C.W, Hofman, M.A, Gooren, L.J, Swaab, D.F (2000)

<sup>120</sup> Garcia-Falgueras, A and Swaab, DF (2008).

<sup>121</sup> Rametti, G, Carrillo, B, Gómez-Gil, E, Junque, C, Segovia, S, Gomez, A, Guillamon, A. (2011).

<sup>122</sup> Rametti, G, Carrillo, B, Gómez-Gil, E, Junque, C, Zubiarrre-Elorza, L, Segovia, S, Gomez, A, Guillamon, A. (2010).

<sup>123</sup> Zhou, J-N, Swaab, DF, Gooren, LJ, Hofman, MA (1995).

<sup>124</sup> Kruijver, FPM, Zhou, J-N, Pool, CW, Hofman, MA, Gooren, LJ, Swaab, DF (2000)

<sup>125</sup> Garcia-Falgueras, A and Swaab, DF (2008).

<sup>126</sup> Reiner and Gerhardt, (2004)

are intended to ensure that when gender reassignment is carried out, the need for it is correct<sup>127</sup>. Current theories identify the causes with genetic influences affecting the foetus in the womb but this fails to take account of how biology and psychology are related. The primitive state of the pre-frontal cortex at birth and the large degree of brain plasticity that occurs from around the age of two years..

### 8:3: Influences

Despite the intensity of feeling which can be manifested in these underlying conflicts, there is no recognition of their existence in traditional approaches to psychology, sociology and psychiatry. Some of the reasons for these omissions have already been examined in this account. The contagious nature of early development also means that there is unlikely to be any single cause for the development of any sexual or gender variant condition. However there are some primary features which are likely to dominate the manner in which they are created. Two main formation mechanisms are identified. One comes from the momentum created by the intensity of physiologically driven forces that involve the mirror neuron system<sup>128</sup>. The second is due to genetic or endocrinal influences before or near birth. The lack or absence of cognitive abilities means that a third formation mechanism, that of social learning, is limited in its effect.<sup>129</sup> None of these excludes the other<sup>130</sup>. Some indication of the relative influences of the first two processes may come from children who have been assigned or reassigned to a gender at or close to birth<sup>131</sup>. A significant but restricted concordance is found. This indicates that gender reassignment of intersex children should never take place until they are able to decide for themselves what is right.

### 9:0: Awareness and Consciousness

The lifetime tension between the feedforward and adventurous forces of physiology and the feedback and restraining forces of cognition is demonstrated in this analysis to provide the stimulation whereby the highest achievements of humanity are gained. Consciousness studies are beyond the scope of this investigation. However it is necessary to examine why the existence of the conflicts which this tension creates appears to be hidden from the conscious mind<sup>132 133</sup>.

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<sup>127</sup> GIRES (2009): full text of the Guidelines for health organisations commissioning treatment services for transgender people (2009), available at [www.gires.org.uk/medpros.php](http://www.gires.org.uk/medpros.php)

<sup>128</sup> Cattaneo and Rizzolatti (2009); Iacononi and Geffen (2009); Keyzers and Fadiga (2008); Rizzolatti and Fabbri-Destro (2010).

<sup>129</sup> Kerlin (2004); Merigiola and Gava (2015); Minot Presentation (2005); Rosenthal (2014).

<sup>130</sup> There is currently intense discussion about the relative importance of nature versus nurture and the extent to which genetic and endocrinal influences are involved. This analysis allows for these, but it does not require it.

<sup>131</sup> Dessens et al (2005); Diamond and Sigmundson (1997); Diamond and Watson (2004); Kipnis and Diamond (1998); Ochoa (1998); Reiner (2004).

<sup>132</sup> Although consciousness studies are beyond the scope of this article, some observations can be made. This research suggests that feed-forward and feed-back processes are also involved. The feed-forward elements come from the sensory inputs received by each person (sight, sound, touch, taste, smell). These are moderated by the feed-back processes associated with the cognitive abilities of the brain. It is argued that conscious perceptions are therefore outcomes of this feed-forward and feed-back process. The effects of neuroplasticity and the tuning of the brain suggest that instant responses will always be in character with the personality that has developed. What might be considered as free will would therefore be a result of this deliberative process: it is not the expression of an instant response. Brain tuning is also global in nature. That suggests that no individual site for consciousness in the brain may exist.

<sup>133</sup> It is of interest to hypothesise further. If consciousness is a product of cognition, then the pre-cognitive elements of personality and identity, including the core gender identity form an unconscious stratum upon which the later cognitively created concepts are based. The development of a personal "Theory of Mind" may be seen to represent a point where conscious processing has reached a certain state. The possession of this enables children to make independent

In Freud's view the unconscious has a will and purpose of its own that cannot be known to the conscious mind. He considered the unconscious to be a repository for socially unacceptable ideas, wishes or desires, traumatic memories and painful emotions which are suppressed from conscious awareness by the mechanism of psychological repression<sup>134</sup>. However, the contents do not necessarily have to be solely negative. In his psychoanalytic view, the unconscious is a force that can only be recognized by its effects. Freud saw the conscious self as an adversary to its unconscious, warring to keep the unconscious hidden. Therefore unconscious thoughts are not directly accessible to ordinary introspection, but are supposed to be capable of being "tapped" and "interpreted" by special methods and techniques such as meditation, free association (a method which was largely introduced by Freud), dream analysis, and verbal slips, which are examined during psychoanalysis.

Carl Gustav Jung developed Freud's concepts further. He agreed with Freud that the unconscious is the determining factor in the creation of personality, but he proposed that the unconscious should be divided into two layers: the personal unconscious and the collective unconscious. The personal unconscious is a reservoir of material that was once conscious but has been forgotten or suppressed, much like Freud's notion. The collective unconscious, however, is the deepest level of the psyche, containing the accumulation of inherited psychic structures and archetypal experiences. Archetypes of this are not memories but images with universal meanings, which are apparent in the culture's use of symbols. The collective unconscious is therefore said to be inherited and contain material of an entire species rather than of an individual. According to Jung a person shares the collective unconscious with the entire human race, Jung states that the "whole spiritual heritage of mankind's evolution, born anew in the brain structure of every individual"<sup>135</sup>.

Unlike the social learning theories, which rely entirely on the cognitive processes, Freud argued for the existence of some strong underlying driving force that would impel development forward with the intensity that he observed. He chose the sexual impulse - and that has remained the foundation for much of present day understanding and psychoanalysis. Girard replaced this driving mechanism with a form of possessive imitation, which he called 'mimesis'. Crucially he distinguished 'imitation' from 'mimesis'. The former is usually considered to be the positive elements of reproducing someone else's behaviour, whereas the latter normally involves use of the negative aspects of rivalry to obtain supremacy and domination for the individual or the group concerned. For Girard the strength of the conflicts created by this rivalry inevitably lead to violence and destruction unless some escape route is provided. Girard argued that the scapegoat mechanism fulfilled this role.

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judgements on their own thoughts and activities. That ability becomes effective from about the age of four years, and this is the age at which large numbers of transgender people register a discomfort with the gender identity they are expected to possess. For others this only occurs at a later stage, often at puberty or at a time of depression or trauma when the subconscious elements of identity can no longer be suppressed. Many children go through periods of believing they belong to the wrong gender, but for most this is cognitively resolved. For others it is not, and for those who seek to suppress these subconscious elements only truces can be found. This struggle between these two elements straddles the conscious and subconscious mind. These development processes are not just concerned with gender. Their dynamics share features with other aspects of early personality development. This investigation does not preclude pre-natal effects or genetic influences but it does not require them. Either way the view that "Transsexuals have been born into the wrong body" is strongly felt: and that may be expected from the nature of this account. Once the genie has come out of the bottle, people may try to find the right way to live with it, but it can never be put back.

<sup>134</sup> Freud divided the mind into the conscious mind (the ego) and the unconscious mind. Later he then further divided this into the id and the superego. In his theory, the unconscious refers to the mental processes of which individuals make themselves unaware. Freud proposed a vertical and hierarchical architecture of human consciousness: the conscious mind, the preconscious, and the unconscious mind, each lying beneath the other. Freud believed that significant psychic events take place "below the surface" in the unconscious mind and appear like hidden messages from the unconscious. He interpreted such events as having both symbolic and actual significance.

<sup>135</sup> Jung, C.G. (Author); Adler, G., Hull, R.F.C., (Translators) (1970):

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Girard crucially considered that the scapegoat mechanism must be unconscious in order for it to work, if its participants recognize what is happening, the transfer of the violence, blame, guilt and anger which this rivalry has created onto others or, onto a symbolic representation, does not take place. Although Girard correctly identified the driving mechanism, he continued the base his analysis on the presumption that cognitive processes guide the development of personality and identity at all times of life. Girard took great inspiration from Freud. However he considered that Freud's observations were only partially correct. He considered that Freud was correct in pointing out that culture is indeed founded upon a murder<sup>136</sup>. But, this murder is not due to the oedipal themes which Freud was so fond of. Instead of this, the founding murder is due to the action of the scapegoat mechanism. For Girard the reason the crowd murdered the victim (and not necessarily a father figure) was in order to project onto the victim all the violence that was threatening the existence of the whole community<sup>137</sup>.

If Girard's greatest success came from the correct identification of the driving forces behind the development of personality and identity, it might be argued that the greatest failure in this area was his continued use of traditional psychoanalysis for their interpretation. However his achievement should not be underestimated: it is entirely in line with what was available at the time. In 2006 Garrels<sup>138</sup> stated: "What makes Girard's insights so remarkable is that he not only discovered and developed the primordial role of psychological mimesis (...) during a time when imitation was quite out of fashion, but he did so through investigation in literature, cultural anthropology, history, and ultimately returning to religious texts for further evidence of mimetic phenomena. The parallels between Girard's insights and the only recent conclusions made by empirical researchers concerning imitation (in both development and the evolution of species) are extraordinary (...)" In 1976 Dawkins introduced the concept of the meme<sup>139</sup>. This approach moved away from reliance on cognitive analysis: and it saw evolutionary competition as the driving force. It was the work of Gallese and others during the 1990s and onwards on mirror neurons and the physiological bases for empathy, imitation and inhibition which paved the way for the understanding used in this analysis. That is supported by the developments in neuroscience in recent years.

The second learning mechanism which is identified in this analysis dominates the development process up to the neural transformation period, which is taken to be the median figure of around the age of two years. This is considered to be the due to the internally driven physiological processes involving empathy, imitation and inhibition acting on their own. Their contagious nature ensures that the maximum possible amount of information is collected. However without the necessary degree of neural co-ordination that is required for the cognitive processes to operate, development proceeds through the rejection of what is wrong. It also means that interpersonal relationships cannot be separated from interpersonal relationships. Therefore tribal and collective, rather than individual senses of identity can only be created. These may be the equivalents of those that are held in the collective unconscious, as described by Jung. Girard documents an equivalent process whereby tribal identities are also formed. This investigation uses gender dysphoria to model the process. It has been shown that the core sense of gender identity has become unchangeably locked in place by the age of three years. Two things follow from this. The first is to note that it has become fixed before the cognitive development processes have become effective. That means that the sense of core gender identity which is created, is determined by the internally driven physiological forces

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<sup>136</sup> Girard agrees with Freud's attempt to define a sort of year zero in the history of human culture. This is associated with the "Founding Murder" which sets development off in a particular direction. For Freud this is patricide for Girard it is the sacrifice of the surrogate victim. Both of them seek to reconstruct the genesis of institutions by starting from a generative event..

<sup>137</sup> Girard, R. and Williams, J.G. (1996): Kirwan, Michael (2005).

<sup>138</sup> Garrels, S. R ( 2004, 2006)

<sup>139</sup> Dawkins, R. (1976)

acting alone. At this time no personal concepts of self and gender have been formed. Therefore the second point to note that this is a tribal or collective association which identifies an individual's place in society. It is a statement of where one belongs. This is also shown to be the time when a constancy of personality is created. It is demonstrated that these transitions are largely complete by the age of three years. However children do not develop the degree of self-awareness which allows them to question the direction of their own development until about the age of four years. Therefore these processes and the conflicts which may arise from them remain in the unconscious mind.

It follows from this analysis that there are two distinct and differently directed processes involved in creating a gender identity. When the two processes are in harmony little difficulty may be expected. However when they contradict each other strong trauma can be found. While many transsexuals may become aware that "something is wrong" from about the age of four years, for others the effects of this conflict may stay hidden until some trauma or change causes it to erupt into the conscious mind<sup>140</sup>. Once the genie is let out of the bottle it cannot be easily put back. For some people a late onset of the gender conflict occurs. These features make it difficult for other people to understand the true nature of these conditions and to identify the extremities of the trauma that can be found.

In theory gender identity might be used as a model to examine these processes. The problem with this is that the development of the core gender identity takes place before any conscious awareness can be created. When there is no clash between the results of the earlier and later development processes they will simply act together to affirm and strengthen the understanding of gender identity that is consciously formed. This means that no direct evidence for any earlier process will be observed. This is also why a gradual and later development of gender identification is assumed to take place<sup>141</sup>. However in the case of gender dysphoria strong conflicts certainly do occur from a very early age<sup>142</sup>. This means that gender dysphoria becomes a valid test to model how

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<sup>140</sup> Puberty is one time when this awareness often first occurs.

<sup>141</sup> In the standard and conventionally accepted gender studies it is shown that in young children, their initial concepts about gender are quite flexible. They do not begin to notice and to adopt gender-stereotyped behaviour until the age of two or three. A few years later, their concept of gender becomes quite rigid. Before the age of five, children do not seem to think that gender has any permanence. A pre-school child might ask his female teacher whether she was a boy or girl when she was little, or a little boy might say that he wants to grow up to be a mummy. Toddlers think that changing clothes will also change gender. It is not until children understand that boys have penises and girls have vaginas that they know that changing clothes does not change gender. Research suggests that children's concept of gender develops gradually between the ages of three and five. Once children begin to think about gender as a stable trait, they also start to incorporate gender into their own identity. From around that time they become motivated to relate to other members of their group, and to seek out gender-related information, often becoming very strict about adhering to gender stereotypes. When they are between seven and ten years of age children become more relaxed about maintaining these gender stereotypes. This is therefore a process of self-discovery and self-awareness. These require cognitive abilities to be present. Traditional development theories presume that these processes act on a blank canvas and that gender identity is entirely created through the behaviour predicted by the social learning and psychodynamic development theories. This analysis shows that the elementary core gender identities are created by pre-cognitive processes and that the conscious allegiance to a gender identity is the result of a struggle between these unconscious and conscious conflicting demands.

<sup>142</sup> Early medical involvement in the management and treatment of transgender and intersex people was made on the assumption that the standard description of the development of gender identity, as is described above, applied. Social learning theories were used and it was presumed that a blank canvas was available before these gender associations could be learned. The experience of treating gender variant people showed that this was not the case, and gender identification was firmly fixed at a much earlier age. Furthermore they came to the conclusion that it was impossible for the core gender identity to be changed any later than three years of age. This still did not fit the actual circumstances and one investigator (Stoller) tried to adapt Freud's theory of psychodynamics by presuming that the desired state was female, and not male, in order to bring this threshold down to an age of between one and two years. However he still tried to apply the psychodynamic and social learning theories on this basis. This persistence had disastrous consequences. Stoller and Money continued to treat and report the results of their gender and sexually variant people on the presumptions that social learning theories applied, after their own results had challenged the conclusions that were made. That led to the

development proceeds because the unconscious sense of core gender identity is shown to be fixed at the latest by the age of three years, and it can be applied before, during and after neurophysiological transformation occurs.

### **9:1: Disappearance**

All of these theories deal with conflicts which straddle the conscious and unconscious mind. When no conflict exists there will be no conscious awareness of the formation processes that are involved. Nevertheless their impact remains. The lifetime tension between the feedforward and adventurous forces of physiology and the feedback and restraining forces of cognition is demonstrated in this analysis to provide the stimulation whereby the highest achievements of humanity are gained.

This same disappearance from conscious awareness may also be why these underlying neurophysiological development processes fail to be recognised in standard psychiatry and psychology. Another reason may come from the social attitudes which have been created by the centuries of scapegoating and condemnation of all gender and sexually variant behaviour by the Christian Church. This religiously based approach refuses to recognise the duality inherent in gender and sexually variant behaviour, it denies the existence of the identity elements within it, and it condemns all forms of gender and sexually variant behaviour, irrespective of its purpose, as disordered lifestyle choices, which are in pursuit of immoral lust and sex.

### **10:0: Manifestations**

It has been shown in this analysis that the correct methods of managing identity and reward driven conflicts are almost opposite to one another. The refusal by religious groups to recognise that these are identity driven conditions and to condemn them as lifestyle choices has caused great harm to be done, because the incorrect medical diagnoses have been made. All management methods must correctly identify not just the nature and causes of these conditions, but also how they manifest themselves in later life.

### **10:1: Interpretation**

The difficulty for anyone who faces these identity driven conflicts is one of how to interpret their consequences when the origins and dynamics of the conflicts themselves are hidden from the conscious mind. Girard's crucially considered that the scapegoat mechanism must be unconscious in order for it to work. In Freud's psychoanalytic view, the unconscious is a force that can only be recognized by its effects. In this investigation it is demonstrated that the core elements of personality and identity have become fixed in place sometime about a year after any awareness of what has happened can occur.

Although Freud and Girard both recognise that the origins of these conflicts are hidden, both apply cognitively based mechanisms to explain their effects. That is fine when the cognitive abilities have developed sufficiently to monitor what has taken place. However this cannot occur before these have been formed. They do not explain how the development in infancy takes place, and the presumption that cognitive influences are instrumental in guiding development at all times of life

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discrediting of their work. Work on intersex children, who were reassigned/assigned to a particular gender soon after birth also showed that considerable trauma could occur. This has led to the current practice of deferring surgery on intersex children until they could decide for themselves, the gender identity that is correct. For more information on this see section 5:9 of this account.

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cannot be applied. All of the neurophysiologically based development theories take a common approach. Fragmented elements of individuality first form in a disorganised way. These then compete and combine through the victories and coalescence of those elements that succeed, so that the more global concepts are formed. Gallese has shown that these are driven by inbuilt neurological responses, rather than cognitive choice. Models involving the coalescence of bubbles and the formation of the memplexes described by Dawkins have already been referred to. The assumption is made that when the coalescence occurs, all evidence of the fragmentary elements which had contributed to the more global concepts disappears.

That is disputed in this investigation. The contagion and momentum of the early development processes, the restrictions on learning capabilities, the limited degree of neural integration and the dynamics of the quorum sensing process do not suggest that there is an orderly process involved. Cognitive continuums extend across function as well as time: and in their absence severe but localised disturbances may be found. The constructs which Girard and Freud describe are attempts to give rational explanations for the outcomes of conflicts which had already taken place. Although the core elements may coalesce between the ages of two and three years, attempts to rationalise the relationships between them have to wait for a later date. Therefore an alternative model is presented in this analysis, which takes account of the time delay that occurs. In this model it is argued that individual concepts are not lost within this coalescence but these remain hidden inside the matrix underneath<sup>143</sup>. Therefore it is the continuing presence of this underlying graininess which disturbs the coherence of selfhood that is being formed<sup>144</sup>. The effects of these conflicts are felt in the lack of coherence that is created. A description of the impact of this may be found in the poem "Stones in My Pocket", which is available in the anthology: "Verses in Search of the Self"<sup>145</sup>

It is concluded by this analysis that the conflicts which are associated with gender identity must be seen as the symptom of the failure to build a coherent sense of self identity, rather than the cause. This also means that for everyone the development of their own gender identity proceeds in the same way. Transsexuals develop an allegiance to their gender which is contrary to their biological sex, but this is at least as firmly held as those for whom their gender identity and allegiance follow a normal path, indeed it may be argued that the gender allegiance which is felt by transsexuals should be even stronger because it has had to be fought for all along the way<sup>146</sup>. In this investigation it is

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<sup>143</sup> The way in which people increasingly identify themselves may not be in accordance with male and female binaries. The conflict for transsexuals pits the desire to satisfy ones deepest sense of self identity against relationships with others that are earnestly kept. The changes in society enable people to more easily reject the exclusive allegiances that are enforced.

<sup>144</sup> This can be used to explain the differences between various conditions. For example the relationship between transvestism and transsexuality can be explained by this analysis. For a consideration of this, see: Gilchrist, S. (2011): "Verses in Search of the Self: Poems and Commentary": <http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

<sup>145</sup> Gilchrist, S. (2011): "Verses in Search of the Self: Poems and Commentary": <http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

<sup>146</sup> The bipolar division into male and female is a strong element in society. Those who advocate social learning theories may argue that simply bringing a child up in a gender transcendent or neutral environment would result in the loss of this bipolarity. However these contagious internally generated self-reinforcing processes of early development and the consequences of the very specific learning capabilities at this time are considered to lead children to identify themselves in terms of male and female tribes. This is independent of the expectations of learning which others apply. That identification is considered to be led by behavioural differences between boys and girls which are present from birth. This is where genetic influences may play a role. With the development of cognitive processing this tribal identity is turned into the core gender identity which becomes locked in place at the latest by three years. From this time children very strongly reinforce the gender differences between them. Gender bipolarity therefore is not simply a matter of social learning, and these precepts of polarity become embedded in society as well. The developing attitudes within society have led to an increasing fluidity in social attitudes to gender and sexual variation and that is reflected in the attitudes of gender and sexually variant people as well. Many more gender and sexually variant people are now refusing to identify themselves according to these binaries. That should be welcomed by all.



shown that the formation of the core gender identity is just one example of a generally applicable process. Therefore it should be expected that other core aspects of personality and identity form in a parallel way.

### **10:2: Identity and Allegiance**

There is a roughness to this process. Instead of building a gender identity which is exclusively male or female, the contagious nature of development means that people create an identity which is a composite of the early concepts that were formed. This also means that there is a different end point for every individual who resolves their conflict with the gender that they are assigned to, and this can account for the great variety of experience that is encountered. This analysis makes a distinction between identity and allegiance. Identity defines the raw components which drive the conflict, allegiance is what people are aware of and it evolves from trying to make sense of the disparities which these conflicts create. It is the need to make sense of this graininess and the requirement to conform to the expectations of society which encourages exclusive allegiances to be created. That allegiance is often exclusively male or female. It is a feature to which total loyalty is required<sup>147</sup>. However the greater fluidity in present day society results in an increasing number of people who are refusing to define their own allegiances in binary terms.

### **10:3: Comparisons**

The perception that transgender people have is one of struggling to make sense of a concept that has already been created. Instead of acting on a blank canvas, it has been shown in this investigation that the traditional social learning and psychodynamic theories can only be used as overlays on what has already been formed. The cognitively based explanations provided by Girard, Freud and others are therefore ways of providing rational explanations for the impact of the driving forces that had earlier been formed. This analysis illuminates these traditional theories. It does not reject them. Provided the presumption that cognitively based processes are required to guide development at all times of life is removed, and the existence of the internally driven physiological forces is recognised, these theories can be applied to later development. For example Girard's cognitively based descriptions of mimesis and rivalry to account for the actions of the internal driving forces; and his identification of the scapegoat mechanism as a means to control them, may be validly applied to the subsequent management of these conditions. That forms an important part of other work that the author is engaged in. However for the understanding of their origins the analysis presented in this account must be employed. Freud uses psychoanalysis to examine the unconscious mind. Provided this is used to explore the characteristics which the physiological driving forces have created, and not just the disruptions of later development, (which Freud presumes), there is much that might be gained from this approach,

### **10:4: Deviation and Perversion**

This investigation makes a clear distinction between identity driven and reward driven characteristics and conflicts. It also indicates that the correct methods of management are almost opposite to one another. Considerable harm can be done when the wrong methods are applied. Freud struggled with an analogous situation when he considered the concepts of inversion, deviation and perversion, and how they are applied.

In referring to deviation in relation to the sexual object, Freud states that: "It is therefore very surprising to hear that there are men for whom the sexual object is not woman but man, and that

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<sup>147</sup> See section 5:4 of this document on conflict dynamics

there are women for whom it is not man but woman. Such persons are called contrary sexuals, or better, inverts; that is, these form the actualities of inversion. They exist in very considerable numbers, although their definite ascertainment is subject to difficulties". Freud considers the basic sexual instincts of infants to always be perverse. In his three essays on sexuality he states: "A disposition to perversions is an original and universal disposition of the sexual instinct. ... normal sexual behaviour is developed out of it as a result of organic changes and psychical inhibitions occurring in the course of sexual maturation"<sup>148</sup>. By this description, one presumes that Freud is referring to the normal heterosexual instincts which society expects. Thus the infant climbs out of what was once perverted behaviour to adopt a normal and not a deviant role.

Freud classes those for whom this has not happened as inverts who deviate from what is expected. He notes that: "The inversion is found among persons who otherwise show no marked deviation from the normal. It is found also among persons whose capabilities are not disturbed, who on the contrary are distinguished by especially high intellectual development and ethical culture. In considering innateness he states that: "Only for the first and most extreme class of inverts, as can be imagined, has innateness been claimed, and this from their own assurance that at no time in their life has their sexual impulse followed a different course". The terms deviation and perversion are sometimes used interchangeably although perversion is the stronger term. In psychology and psychoanalysis, there is an additional difference in the interpretation. A deviation means that, although development proceeds along atypical lines, there is no disruption to the direction that is taken, and which is strong enough to alter the goal that is sought. In a perversion the disruption is so great that some compensating goal replaces the original pursued. Development is interrupted, and regression into substitution or immature behaviour may occur.

Freud identifies homosexuality in its purest form as a deviation: his attributions of its early development and its constancy associate it with an identity driven condition as well<sup>149</sup>. However deviation has a somewhat negative connotation in the psychodynamic context. That is not the case when the results of this analysis are applied. It is fundamental to the creation of individuality and in this investigation it is demonstrated that the physiological, neurological and psychological aspects of brain development act together to form a finely tuned system in which the maximum amount of individuality, possessiveness, intelligence and inquisitiveness, together with the minimum degree of energy expenditure is formed.

### **10:5: Stimulation and Compulsion**

This conclusion places a new perspective on deviation and compulsion. The stimulation provided by the interactions between the feed-forward and feed-back development processes ensures that the widest range of opportunities is presented. The freedom this gives is also to be encouraged provided it has no governing negative consequences. However the intensities of the driving forces mean that compulsions may occur. Some compulsions may lead people to pursue the highest achievement and fulfilment that they can muster. They may be admired for this and often they will not be recognised as compulsions unless complications occur. In this account these are described as compulsions of libido. Other compulsions may be self-destructive in nature and these are described as compulsions of mortido in this document<sup>150</sup>. They may lead to outcomes such as depression and addiction. Both sets of compulsions are associated with deviation and identity driven conflicts. Therefore the correct management methods must be applied.

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<sup>148</sup> Freud (1905/1915)

<sup>149</sup> Kirby, A. (2008).

<sup>150</sup> For further discussion on compulsions of libido and mortido see sections 5:6, 10:6 and 13:3 of this document

## 10:6: Foundations

The compulsions that arise from gender dysphoria may be regarded as compulsions of libido since their goal is to seek fulfilment in life. These earlier identity driven conflicts develop because of discordances with the core senses of identity and personality which have been created. It has been shown that this cannot be changed after a constancy of personality is established<sup>151</sup>. Therefore attempts to fight or suppress the conflicts do not succeed. The more they are fought or suppressed the stronger they become, and the repeated failures lead to a runaway drive<sup>152 153</sup>. Collapse often occurs from the attrition and exhaustion caused by the continual struggles and from the failure of the attempts to meet these demands.

As second requirement is the creation of a stable base. It has been shown in this analysis that there are two distinct and differently directed processes involved in creating a gender identity. The first of these, the core gender identity, provides the foundation upon which all future development is based. Without building on this base, towers of selfhood may be created which are destined for collapse<sup>154</sup>. However the presumptions made in traditional psychiatry and analysis do not allow for its existence because it is presumed that the later-acting cognitive processes guide development at all times of life. That omission is addressed in the neurophysiological and psychological part of this investigation. However an even greater barrier to its recognition comes from the religious traditions of the Christian Church. That is why an extended examination of these religious traditions has been conducted as part of this investigation. These extended studies are reported elsewhere<sup>155 156</sup>

## 11:0: Religious Traditions

The results of this neurophysiological and psychological study are used to conduct a critique of the traditional teaching of the Christian Church. It is also essential to bypass the traditional assumptions of Christian history and theology to obtain a fresh perspective. In this document it has already been demonstrated that the creation of core gender and sexual identities are identity driven. They are not behaviourally driven, and that distinction is important. It is also shown that the duality encountered in gender and sexually variant behaviour is inherent to the condition. This means that these features are present in all societies at all times. A full analysis of this is separately given<sup>157</sup>

This critique adopts a radical methodology which is only made possible by the results of the neurophysiological and psychological study. The approach which is taken is in the first instance is to

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<sup>151</sup> See section 8:0 in this account

<sup>152</sup> Gilchrist, S. (2013): "*Management Techniques for Gender Dysphoria with Particular Reference to Transsexuality*". This paper can be accessed at: <http://www.tgdr.co.uk/documents/205P-ManagementTechniquesInGenderDysphoria.pdf>

<sup>153</sup> Footnote amended August 2016: See also: Gilchrist, S. (2015): "*Personality Development and Gender: Why We Should Re-think the Process*": <http://www.tgdr.co.uk/documents/209P-RethinkPaperFull.pdf>

<sup>154</sup> Gilchrist, S. (2003): "*Selfhood's Tower*": Poetry Anthology: <http://www.tgdr.co.uk/documents/302V-Selfhood'sTower.pdf>

<sup>155</sup> See: Gilchrist, S. (2013): "*Gender, Sexuality and the Christian Church*": <http://www.tgdr.co.uk/documents/015B-GenderSexualityChurch.pdf> . Gilchrist, S. (2013): "*A Reassessment of the Traditional Christian Teaching on Homosexuality, Transsexuality and on Gender and Sexual Variation Using a New Neurophysiological and Psychological Approach*": <http://www.tgdr.co.uk/documents/207P-ReassessmentPsychologyExtended.pdf> . Gilchrist, S. (2013): "*Reform and the Christian Church*": <http://www.tgdr.co.uk/documents/008B-ReformChristianChurchArticle.pdf> . Gilchrist, S. (2013): "*An Unfinished Reformation*": <http://www.tgdr.co.uk/documents/016B-UnfinishedReformationArticle.pdf>. Gilchrist, S. (2011): "*Issues on the Sanctity of Same-Sex Relationships*": <http://www.tgdr.co.uk/documents/014B-IssuesOnTheSanctityOfSame-SexRelationships.pdf>

<sup>156</sup> Footnote amended August 2016: Gilchrist, S. (2016): "*Foundations of Science, Sex and Gender Variation in the Christian Church*": <http://www.tgdr.co.uk/documents/217P-FoundationsSexGender.pdf>

<sup>157</sup> See: Gilchrist, S. (2013): "*Gender, Sexuality and the Christian Church*": <http://www.tgdr.co.uk/documents/015B-GenderSexualityChurch.pdf>

conduct a review of first century Greek, Jewish and Roman societies without any reference to Christianity. In it the principles underlying this moral duality are applied. Only afterwards are the Christian interpretations assessed. It is demonstrated that, not only was the duality inherent in gender and sexually variant behaviour known to Jesus, it was incorporated into his own teaching.

Therefore the changes in theology which today condemn without exception all forms of gender and sexually variant behaviour as being disordered lifestyle choices which “substitute the sexual act for the gift of life” and are in pursuit of lust and immorality, come from changes in the theology of the Church. The greatest concern in Jewish Society and in the early Christian Church was not about the sexual acts. Instead it was for their abuse for gender coercion and the enforcement of power and domination over subject groups by the dictatorial and dominant first century societies<sup>158</sup>. This came to be matched by a Christian disapproval of all sex. Thus it is not surprising that all awareness of the duality in gender and sexually variant behaviour disappeared, and that this behaviour came universally to be condemned as mortally sinful and evil acts.

An extended theological analysis has been conducted which examines the cultural values of the surrounding first century and earlier societies. The teaching of the Church is examined from the perspectives of the teaching of Jesus, Old Testament interpretations, the neurophysiological and psychological study, the doctrines of the New Covenant and the Jewish Midrashim traditions<sup>159</sup>. It is confirmed that the abuses of power were the major concern instead of the pleasures of sex<sup>160 161</sup>. From all of these standpoints it is demonstrated that a moral duality is encountered in gender and sexually variant behaviour, which demands the welcome of cross-gender activities and same-sex relationships which are the outpourings of love and faithfulness, while condemning those that are pursued for abusive and illicit sex. It is also established that identical criteria in relation to use and abuse should be applied to heterosexual and same-sex acts of sex. There is no diminution of moral standards and no condonation of abusive sex. All sexual and cross-gender behaviour is governed by the purity of intention, and in every faithful, loving and committed relationship where the abuses of power are absent, there is no condemnation of any same-sex or cross-gender act.

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<sup>158</sup> The consequence of the suppression of all types of same-sex relationships by the Christian Church for over one thousand years has meant that the ability to make those distinctions has been lost. As a consequence of this the assumption that homosexuality is exclusively about promiscuity and sexual immorality would become universally accepted. The denial of these distinctions has also led to the belief that it is entirely driven by desire and that it is a lifestyle choice.

<sup>159</sup> Footnote amended August 2016: See: Gilchrist, S. (2016): “*Influences of Gender and Sexual Variation on the Life and Teaching of Jesus*”: <http://www.tgdr.co.uk/documents/219P-InfluencesJesus.pdf>

<sup>160</sup> There are a number of “so called clobber passages” in the bible which are claimed to condemn same-sex acts. These are analysed in detail in the companion papers. The passage most frequently quoted is that in Leviticus 18:22 and 20:13, which states (in literal translation): “And with a male you shall not lie the lyings of a woman”. This is extensively examined in the other papers by the author from the Jewish and Christian perspectives, and through the interactions with dominant societies. (See for example: Gilchrist, S: (2013): “*Gender, Sexuality and the Christian Church*”:

<http://www.tgdr.co.uk/documents/015B-GenderSexualityChurch.pdf>). In the early rabbinic interpretations it is clearly attested that these prohibitions were about the issues of humiliation and domination in unequal societies. It is shown that this is the reason why the prohibitions in Leviticus 18:22 and 20:13 are confined to male anally penetrative same-sex acts. Responsibility in sexual behaviour was also demanded. However in this early testimony the focus of these condemnations related to issues of responsibility and the cultural and power battles between dominant and subject societies. That defined the attitudes to all same-sex relationships and the condemnation of same-sex intercourse was not because of an intrinsic horror of the act.

<sup>161</sup> Footnote added August 2016: See also Gilchrist, S. (2016): “*Influences of Gender and Sexual Variation in the History and Traditions of the Christian Church*”: <http://www.tgdr.co.uk/documents/220P-InfluencesChurch.pdf>

Gilchrist, S. (2016): “*Influences of Gender and Sexual Variation on the Life and Teaching of Jesus*”: <http://www.tgdr.co.uk/documents/219P-InfluencesJesus.pdf>

## 11:1: Present Day Issues

This is a radical analysis. No doubt it will be challenged, but it is important that its arguments are heard. What is important for the purpose of the neurophysiological and psychological aspects of this investigation is the impact which this traditional church teaching has on present day society.

For as long as the Christian church could retain its social monopoly there was no possibility of change. However in the last fifty years the loss of Church authority, the coming of contraception, the legalisation of same sex relationships and the enactment of anti-discrimination legislation has meant that most people now have personal direct experience of relating to homosexual couples and others in same sex relationships. These observers do not need to have any special knowledge to distinguish between the behaviour of two people in as same sex heterosexual friendship and the behaviour of an equivalent couple in a homosexual partnership, even when there is a total absence of sex.

From the scientific, historical and social points of view this investigation has demonstrated that the traditional teaching of the Church cannot be correct<sup>162</sup>. However homosexuality in particular, is being increasingly condemned by using arguments that are based of the traditional teaching of the Church. In many countries, particularly in Africa, severe legal penalties, including death and life sentences are being proposed or applied. A doctrine which condemns all forms of gender and sexually variant behaviour irrespective of purpose can easily be misused by society. The criminalisation and condemnation of homosexuality by Christianity and society means that there is no chance of the duality in gender and sexually variant behaviour ever being observed. The collusion of sections of the Church with the secular scapegoating of gender and sexually variant people by these societies casts a dark shadow, not just on the churches, but on Christianity itself<sup>163</sup>.

This investigation makes a clear distinction between identity driven and reward driven characteristics and conflicts. It also indicates that the correct methods of management are almost opposite to one another and it shows that considerable harm can be done when the wrong methods are applied. Attempts to treat homosexuality as though it was the result of desire or a lifestyle choice also prove disastrous. Because it is an identity driven condition, not a reward driven one, some relief can be gained by creating a sense of euphoria which transcends its demands. This is the approach taken by some religious groups who claim that a "Cure" has been found, but this only lasts for as long as the euphoria can be sustained. After it is lost it is not something that willpower can regain. The problem with many such groups is that anyone who does not conform to their rules of behaviour may be ejected from membership. These people may be told that God still loves them but to be practicing or non-practicing is not the real issue. The act of rejection becomes a personal attack of the self-identity of that individual and not of their practice. The hurt, guilt and self-loathing caused by this can be enormous. It is also extremely destructive since any attempt to fight or suppress the conflict drives people deeper into distress. Whatever opportunity there is to re-join the group or to keep control of the conflict is either diminished or destroyed.

An issue which causes great hurt to many transgender people is the insistence by the Church that the gender identity one possesses is a lifestyle choice. Not only is this seen to be an attack on their integrity, it is a denial of the great trauma they face. However this has not been just an issue for the Church: it is a position which until recently was taken by psychology and psychiatry. Some in the medical profession still pursue this outlook to the present day. However this viewpoint has now

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<sup>162</sup> Refer to the companion papers for confirmation of the validity of this conclusion

<sup>163</sup> Footnote amended August 2016: See also Gilchrist, S. (2016): "*Influences of Gender and Sexual Variation in the History and Traditions of the Christian Church*": <http://www.tgdr.co.uk/documents/220P-InfluencesChurch.pdf>

been rejected by a great many practitioners and by almost all of the professional bodies who now regard gender and sexual variation as a natural feature of the human condition, and one which is fundamental to the personality that is created. It is certainly not a lifestyle choice<sup>164</sup>.

However this is not an attitude which is adopted by those who use theology to support their opposition to these arguments. To put it quite simply, any departure from the traditional teaching of the Church on gender and sexual variation is seen to be a betrayal of the teaching of Jesus, a departure from scripture, and a departure from the Gospel texts. There is also a disjuncture in this traditional teaching, which does not condemn gender and sexually variant people for having these feelings: it only condemns them for the actions they take. Those who seek to bring the teaching of the Church into line with present day thinking are called revisionists by these people. That is why a review of the history of the Church, which is made as independent as possible of its own doctrine and teachings, is considered important for this analysis. It is shown these revisions and adaptations were made by the Church itself as a necessary part of continuing its existence, so that it could bring the Gospel message to the world. Therefore the aim of this historical and theological investigation is not to explain any revisions to the teaching of Jesus that today need to be made. Its aim is to return to the teaching of Jesus, and to the original message that was brought to the world by the Gospel texts.

## 11:2: Missed Opportunities

There is a continuing history of missed opportunities. The word “Homosexual” was coined in 1869 by Karl-Maria Kertbeny (Or Benkert)<sup>165</sup> who largely considered it to be an identity driven condition. In 1886 Richard Von Krafft-Ebing published an account in “Psychopathia Sexualis”<sup>166</sup>, which described homosexuality as biologically anomalous and originating in the embryonic and foetal stages of gestation which evolved into a “Sexual Inversion” of the brain. Freud and others took up the idea of inversion but gradually the association with same-sex activities rather than identity grew. Freud did not consider homosexual expressions in themselves to be disruptive or disordered acts, and he encouraged those who felt that way to accept their condition<sup>167</sup>. There is now a move within the Western Christian Churches to offer greater pastoral support for gender and sexually variant people but there is still a resolute refusal to consider any possible change to the traditional teaching of the Church.

Within the Anglican Church a number of reports have been published. The most recent of these, the House of Bishops Working Group on Human Sexuality, or the Pilling Report<sup>168</sup>, which was commissioned by the House of Bishops of the Church of England in January 2012, published on the 28 November 2013 at least opens the door slightly to changes in doctrine, but it urges great caution. In 2003 Pope Benedict wrote<sup>169</sup>: “According to the teaching of the Church, men and women with homosexual tendencies 'must be accepted with respect, compassion and sensitivity. Every sign of unjust discrimination in their regard should be avoided'. They are called, like other Christians, to live the virtue of chastity. The homosexual inclination is however 'objectively disordered' and homosexual practices are 'sins gravely contrary to chastity'. In those situations where homosexual

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<sup>164</sup> For evidence of this see: American Psychological Association (2009): “Appropriate Therapeutic Responses to Sexual Orientation” <http://www.apa.org/pi/lgbt/resources/therapeutic-response.pdf>. American Psychiatric Association (2013) “Position Statement on Issues Related to Homosexuality” See: Position Statements of the American Psychiatric Association and AGLP: <http://www.aglp.org/pages/LGBTPositionStatements.php>. Also: World Professional Association for Transgender Health. Standards of Care [http://www.wpath.org/site\\_page.cfm?pk\\_association\\_webpage\\_menu=1351](http://www.wpath.org/site_page.cfm?pk_association_webpage_menu=1351)

<sup>165</sup> Benkert (1869)

<sup>166</sup> Krafft-Ebing (1894)

<sup>167</sup> Kirby, A. (2008)

<sup>168</sup> Pilling Report (2013)

<sup>169</sup> Pope Benedict. (2003)

unions have been legally recognized or have been given the legal status and rights belonging to marriage, clear and emphatic opposition is a duty. One must refrain from any kind of formal cooperation in the enactment or application of such gravely unjust laws and, as far as possible, from material cooperation on the level of their application. In this area, everyone can exercise the right to conscientious objection". A review of Catholic teaching is separately given<sup>170</sup>. There is a basic simplicity to this approach which denies the advancement of science and argues that a male should learn to be a man, and a female should learn to be a woman. Anything else contravenes the divine ordinances and is a sin against God. There is a refusal to engage at any deeper level; and the same attitudes are still found in the present day.

However this is a teaching which condemns without exception all forms of gender and sexually variant behaviour as being disordered lifestyle choices which substitute the sexual act for the gift of life and are in pursuit of lust and immoral acts. It is also teaching which is shown to be incorrect on a scientific, historical and social basis. Great harm is being done in many parts of the world by its intense enforcement and through the medical misdiagnoses that are being made. This issue will not go away until Christianity and the Church is prepared to reconsider its traditional teaching on gender and sexually variant people. This is not the first time in history that the Christian Church has used its theological arguments to defy the advances of science. There is nothing in this analysis which tolerates any form of abusive, immoral or unjust sexual and gender oriented practices. Today, the same harm is still being done by this doctrine's resolute and continued pursuit.

## **12:0: Management**

### **12:1: Conflict Types**

This investigation has made a clear distinction between identity driven and reward driven characteristics and conflicts. It also indicates that the correct methods of management are almost opposite to one another and it shows that considerable harm can be done when the wrong methods are applied. It is hardly surprising to note that conflicts which stem from issues arising before the neural transformation period have different characteristics from those which arise after it. Conflicts and characteristics associated with the formation of the core gender identity are found to concern identity alone. However these are hidden from the conscious mind. Children are only able to question what has happened after the core elements have been formed. Therefore the conflicts that children are aware of come through using their cognitive abilities in later attempts to rationalise what was has already been formed. This paper identifies the formation of personality and self-identity as a process of linking together individual concepts to form a coherent whole. It is argued that the source of the conflicts which are encountered with gender and sexual variation derive from the failure to build a coherent sense of self identity, and that this manifests itself in identity terms.

All of the neurophysiologically based development theories take a common approach which agrees that fragmented elements of individuality first form in a disorganised way. These compete and combine through the victories and the coalescence of those elements that best succeed, so that the more global concepts are formed. Models involving the coalescence of bubbles and the formation of the memplexes described by Dawkins have already been referred to. However the assumption is made that when the coalescence occurs, all evidence of the fragmentary elements which had contributed to the more global concepts disappear.

That is disputed in this investigation. The contagion and momentum of the early development processes, the restrictions on learning capabilities, the limited degree of neural integration and the

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<sup>170</sup> Finnis, John. (2001)

dynamics of the quorum sensing process do not suggest that there is an orderly process. Each of the core elements of personality and identity follows the direction that its own crowd has taken, and there is little overall consistency in this approach. Cognitive continuums extend across function as well as time: and in their absence severe but localised disturbances may be found. This is why an alternative model has been developed in this investigation. In this model, it is argued that individual concepts are not lost within this coalescence but these remain hidden inside the matrix underneath<sup>171</sup>. It is the continuing presence of this underlying graininess which disturbs the coherence of selfhood that is being formed<sup>172</sup>. A description of this may be found in the poem "Stones in My Pocket" which is available in the anthology: "Verses in Search of the Self"<sup>173 174</sup>. The conflicts which people later become aware of spring from their own later cognitively based attempts to rationalise, and to give reasons for, the discords that have already been created.

## 12:2: Purpose

Before any management techniques are considered their goals and objectives must be clearly defined. For some transsexuals there is no question that gender reassignment should be sought. The goal is for fulfilment in life with the ability to live their own lives in ways that are true to themselves. That desire should be totally supported since that resolves the gender conflict as source. A clear path is laid out and no internal conflicts are found.

For other people seeking gender reassignment means swapping one set of problems for another. This is because the relationships and the values which are most cherished in the life they have built would be destroyed by any such action. For these people the compulsion and drive may be just as strong. However conflicts are encountered when the identity which is consciously created through relationships made with others opposes the core gender identity that is felt deep inside. This is a battle which many people would not wish to impose on their own worst enemies. Nevertheless the use of willpower and determination to try to defeat the compulsions that are created all too frequently lead to mental breakdown and collapse. This means that people who do not want to take the path to gender reassignment must find other ways of dealing with the conflicts that gender dysphoria creates. Therefore the aims of these management strategies are to provide people with the maximum possible freedom of choice.

## 12:3: Dynamics

It is understandable that any attempt to rationalise what has happened will look for a direct relationship between cause and effect. However the contagious nature and the lack of cognition in early development mean that the ability to reason out this linkage is absent. As a consequence of this, each experience builds on the previous one<sup>175</sup>. The dynamics take over and the existence or

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<sup>171</sup> The way in which people increasingly identify themselves may not be in accordance with male and female binaries. The conflict for transsexuals pits the desire to satisfy ones deepest sense of self identity against relationships with others that are earnestly kept. The changes in society enable people to more easily reject the exclusive allegiances that are enforced.

<sup>172</sup> This can be used to explain the differences between various conditions. For example the relationship between transvestism and transsexuality can be explained by this analysis. For a consideration of this, see: Gilchrist, S. (2011): "Verses in Search of the Self: Poems and Commentary": <http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

<sup>173</sup> Gilchrist, S. (2011): "Verses in Search of the Self: Poems and Commentary": <http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

<sup>174</sup> See also: Gilchrist, S. (2013): "Management Techniques for Gender Dysphoria with particular reference to Transsexuality": <http://www.tgdr.co.uk/documents/205P-ManagementTechniquesInGenderDysphoria.pdf>

<sup>175</sup> Delayed or deferred imitation is the delayed repetition of a particular behaviour at a later time than when it actually occurred. This phenomenon was first described by the psychologist Jean Piaget who noted that this ability appeared in



the influence of any original cause becomes irrelevant to the process. It has also been demonstrated that the unconscious core elements of gender and personality are unchangeably established by the age of three years. Attempts to fight these battles do not succeed because they challenge what has already been formed. The more these core identities are fought or suppressed, the stronger the battles become, and the repeated defeats create a runaway drive<sup>176 177</sup>.

It is important that the correct management methods are employed. Willpower, rationalisation and mediation can be used as strategies to manage the demands of reward driven conflicts, but attempts to use them for the deeper identity driven conflicts simply reinforce the drive. Girard has shown how the tensions created by such conflicts can be alleviated through the use of the scapegoat mechanism. This is used to transfer the blame for the discord to some symbolic person or object instead<sup>178</sup>. However that process relies on the presence of cognitive abilities to work. In the case of gender dysphoria there is no ability to use the scapegoat mechanism for this purpose unless gender reassignment is pursued, since there is no effective means of transferring the blame<sup>179</sup>. The failure of the repeated attempts to create a satisfactory scapegoat strengthens the conflicts, and this leads to collapse. The more any of these techniques are used to suppress the search for identity, the stronger the conflict becomes. Methods of management must use inclusion and transcendence instead.

Any theory must be tested by the reality of the experiences that are encountered. That includes the experiences of the author, which are described elsewhere<sup>180</sup>. Attempts to impose a gender identity also do not work when there is no secure base on which to build. Without such a base all subsequent development relies on a faulty foundation, and is prone to collapse. Towers of selfhood are created and this may continue for many years. The higher the tower is built, the greater the damage that results<sup>181</sup>. Collapse often occurs from the attrition and exhaustion caused by these continual struggles, and because of the compulsions which result from the repeated failures of suppression and willpower to defeat these demands. Managing these dynamics requires that a secure base is found. These are two key elements that are required.

## 12:4: Transgender Experiences

Classic diagnoses of bipolarity can be associated with identity driven conflicts. However it is shown in this analysis these dynamics are key features which enable the highest degrees of individuality and human potential to be reached. Negative outcomes lead towards oblivion and death but positive outcomes lead to productivity, inspiration and the greatest achievements of humankind. The compulsions occur when these get out of control. However in this investigation distinctions between

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children ages between 18 and 24 months. He noted that infants and very young children are unable to hold memories of behaviours in their memory and recall them later.

Read more: <http://www.alleydog.com/glossary/definition.php?term=Deferred%20Imitation#ixzz4KBDtdOzm>

<sup>176</sup> Gilchrist, S. (2013): "*Management Techniques for Gender Dysphoria with Particular Reference to Transsexuality*". This paper can be accessed at: <http://www.tgdr.co.uk/documents/205P-ManagementTechniquesInGenderDysphoria.pdf>

<sup>177</sup> Footnote amended August 2016: See also: Gilchrist, S. (2015): "*Personality Development and Gender: Why We Should Re-think the Process*": <http://www.tgdr.co.uk/documents/209P-RethinkPaperFull.pdf>

<sup>178</sup> See section 5:3 of this document

<sup>179</sup> Instead of focussing on the need for transition, the focus for transsexuals can be on the need for surgery instead. The genitals become the scapegoat that is used. However if this process is to work the scapegoat must be capable of "throwing away" the blame. In this case the blame cannot be removed, and the mechanism fails. That in turn reinforces the demand for transition, and the cycle is repeated without any resolution being found.

<sup>180</sup> See Gilchrist, S. (2011): "*Verses in Search of the Self: Poems and Commentary*":

<http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>: and Gilchrist, S. (2003): "*Selfhood's Tower*": Poetry Anthology: <http://www.tgdr.co.uk/documents/302V-Selfhood'sTower.pdf>

<sup>181</sup> For an account of personal experience see: Gilchrist, S. (2003): "*Selfhood's Tower*": Poetry Anthology: <http://www.tgdr.co.uk/documents/302V-Selfhood'sTower.pdf>

Gilchrist, S. (2013): "*Personality Development and LGB&T People: A New Approach*"

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compulsions of libido and mortido are made. Compulsions of mortido can be associated with conditions such as depression and addiction but in compulsions of libido the highest degrees of fulfilment are sought. Gender dysphoria can be associated with compulsions of libido. That is more difficult to manage since a drive for fulfilment must be held in check if a balanced outcome is to be obtained. This approach involves building a truce which balances the aspects of self-identity which build on relationships with others against the selfhood which is created by gender inside. Although the sense of gender identity remains constant throughout life, the others change with relationships, commitments and time. Maintaining this truce cannot succeed unless an outlook is adopted which gives the freedom to be able to accept and manage change whenever it is required. This is not an easy course, and it is about finding ways to manage a volcano of emotions that can erupt from deep inside.

A further feature of these conflicts comes from the indirect relationships between the goal that is pursued, the intensity of the demands and the objectives that are required. Often gender reassignment is obsessively sought, but this is the passport which allows people to achieve their true goal, which is to find peace in their lives. It is commonly believed that transsexuals are men who want to be women and vice versa. That is how it is manifested, but the perception that it is about desire is a mistake. The drive is for the rejection of the role that has been forced upon them, and the real need is to enable these people to live lives which are true to themselves. After transition many merge invisibly into society in their new roles. Transsexuals develop a gender allegiance which is contrary to their biological sex, but this is at least as firmly held as those for whom their gender identity and allegiance follow a normal path, indeed it may be argued that the gender allegiance which is felt by transsexuals should be even stronger because it has had to be fought for all along the way<sup>182</sup>. Achieving this goal resolves the conflict at source, so that gender reassignment, and gender confirmation surgery, when it is required, should never be denied<sup>183</sup>.

A major difficulty that other people face in understanding the trauma encountered by transgender people comes from the contrast between the magnitudes of the conflicts that can be encountered despite the modesty of the demands. Cognitive continuums extend across function as well as time. Given the fragmentary nature of early development no cross-functional continuums can be expected to exist. Where disturbances to identity do occur, the disturbance caused is likely to be specific to that area. This result is in contrast to the reasoning of the social learning and psychodynamic theories where some form of continuum is expected. For many people there is no significant change of behaviour or interests, no rejection of existing relationships. Sexual rewards are of little concern when the transition from one role to the other is made.

Attitudes to marriage and family life are of particular concern. Many transsexuals marry in their imposed gender role for all the right reasons and love they possess. However as age increases the drive to transition gets stronger, and if no way is found to manage these dynamics the outcome can be a total, sudden and catastrophic collapse. This can have devastating results. When gender and sexuality are in conflict it is usually gender that wins. There is the destruction of relationships and commitments through the failure to cope, even when love is as strong as ever. There is the blame for letting oneself down, the hurt to other people that has been caused and the guilt for the inability to conform to the edicts of others and one's own expectations. Here too crippling harm can be created by the attitudes of some religious groups who heap guilt on transsexuals who cannot follow the path they prescribe. Further attempts to fight the conflicts only act to destroy the relationships

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<sup>182</sup> See section 10:1 of this document

<sup>183</sup> Although the term gender reassignment is frequently used, it is a term that many transgender people are unhappy with. People frequently describe their experience as "Being born into the" wrong body. Surgery and gender reassignment is sought to correct a mistake made before birth and the term gender confirmation is preferred.

that are sought and to accelerate the demand. The trauma these create can be enormous. Many marriages break up even though the transsexual partner desperately seeks to maintain the relationship, for despite their need to transition they lose nothing of the love that is found in the relationships and commitments they have made.

### **12:5: Transvestites, Transsexuals and Gender Queer.**

For both transvestites and transsexuals, the same type of moral duality and the same lack of linkage between gender and sexuality is encountered. The Beaumont Society is the main United Kingdom support organisation for transvestites. From its foundation, and for many years afterwards, membership of the society was confined to men who have a male heterosexual identity. The Women of the Beaumont Society gives support to their partners and wives.

People cross dress for many reasons. For some people this is to do with sexuality. However this section is concerned with gender motivated transvestites alone. The differing experiences of transvestites and transsexuals also act to reinforce the polarities that are created. The more transsexuals express their cross gender identity the more their experiences confirm that it is correct. Attempting to suppress it promote a runaway drive, which leads to failure and collapse. Transvestites may similarly try to suppress their cross gender identity and also fail. The need for an outlet through the enactment of their cross gender identity then arises. However instead of creating the same runaway drive, the act of expression acts as a test which confirms and enforces the truth of the male gender allegiance they possess.

It is considered that both conditions are driven by the rejection of the imposed gender. However the disturbances to the gender identities and allegiances that are created produce opposite results. For transvestites the ability to pass as a woman in society becomes the key ambition. Through expression it also becomes the scapegoat to reject<sup>184</sup>. The compulsion becomes self-limiting since the act of expressing the female has the effect of affirming the truth of the male<sup>185</sup>. If this compulsion is resisted it can become overwhelming, but the expression of the cross gender identity gives only temporary relief. Some do live full time in the cross gender role. However for most the need for expression is episodic although the compulsion is no less severe. All the medical attempts to relieve transvestites of their compulsion have failed. Now the usual advice is to encourage transvestites to accept their drive, to find an acceptable means of expression and to treat it like a hobby to be enjoyed.

When transvestites and transsexuals first start to explore their gender identities it can be difficult for them and for others to distinguish between the two conditions. As the exploration progresses the differences become more clearly seen. The dynamics of the conflict send people in different directions and this polarisation creates the divisions which separate the two groups. It is the same need to make sense of their identity which means that each person, and the demands of society create an exclusive and polarised gender allegiance, which is either male or female and it is one to which total loyalty is required.

Today the relaxation of the requirement to conform to gender stereotypes has resulted in an increasing number of women and men coming forward who are now defining themselves as gender nonconforming or gender queer. This is a very wide ranging group but the refusal of this group to identify themselves with any one gender enables the creation of other outlets which are able to endorse the strength of the conflict's demands. Although these people refuse to conform to the

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<sup>184</sup> For transsexuals the object that is made the scapegoat is the genitals they possess

<sup>185</sup> That is discussed further in Gilchrist, S. (2011): "*Verses in Search of the Self: Poems and Commentary*": <http://www.tgdr.co.uk/documents/301V-VersesSearchOfSelf-PoetryAnthology.pdf>

binary boundary it is the impression of the author that the need to create a clear identification is also as strongly held.

### **12:6: Management Techniques**

There are two strategies to be considered. For some transsexuals there is no question that gender reassignment should be sought. That desire should be totally supported since that resolves the gender conflict as source. A clear path is laid out and no internal conflicts are found. For other people the compulsion and drive may be just as strong. However conflicts are encountered when the identity which is consciously created through relationships made with others opposes the core gender identity that is felt deep inside. The failure to find a satisfactory way of managing this can often lead to mental breakdown, suicide or catastrophic collapse.

This is not just a concern for transsexuals. It is not just transsexuals, gender motivated transvestites also put their relationships and marriages at risk because of the compulsions they also face. These likewise create battles that many people would not wish upon their own worst enemies, and that dismisses the idea that these are lifestyle choices which are driven by the desire for a role. This independence from gender identity affirms the arguments presented in this analysis. These conclude that the conflicts which are associated with gender identity must be seen as the symptom of the failure to build a coherent sense of self identity rather than the cause. It also affirms the need to distinguish gender allegiance from gender identity: if identity represents the unconscious concept that was first created; the conscious and polarised allegiance arises from trying to make sense of the elements of identity that have already been formed.

Ways of managing the conflicts and compulsions this creates are needed. One of the most obvious management strategies to adopt is that of establishing a secure base. Instead of being shaken by the earthquakes beneath, any tower of selfhood that is constructed need only withstand the gales that blow at the top. That is the approach which is recommended as a result of this examination. It does not mean that any method of management will be easy, but it can better withstand the compulsions that occur.

### **12:7: Freedoms of Choice**

This investigation puts forward a strategy for transsexuality which aims to calm the dynamics of the conflict. It does not itself remove the latency but it does enable people to find the correct path. It seeks to create an inclusive identity so that considered decisions can be made. This may lead towards gender reassignment or it may not and it is fundamental to its functioning that either result must be treated as being equally correct. It works by enabling people to find a balance between the need to be fully oneself in the life that gender allegiance demands and the loyalty to the commitments and relationships that have been made in the life that has been built. This balance changes with time and attempts to fight the conflict destroy the transcendence required. Keeping and having the knowledge of the freedom to change if it ever becomes needed is essential for its success.

### **12:8: Inversion**

An approach which accepts the reality of the core gender identity and builds one's life on it is an inversion of approach. However acceptance alone is not enough, since the need to wholeheartedly welcome and cherish this gender identity is needed to stabilise the base for the foundations of self-identity and to build the self-esteem that is required. The author calls this approach one of inversion. It is also of interest to note that Freud described people who are exclusively homosexual as inverts. In Freud's own work there is also some indication to suggest that similar management techniques

should be applied<sup>186</sup>. The same approaches can be applied more generally to gender and sexually variant people. Even though these conditions are independent, the dynamics of the driving forces behind them are the same.

A further requirement for effective management is to accept and understand what is happening, why this methodology is needed and to be aware of the objectives that are involved. Girard notes that an important way of neutralising the scapegoat mechanism comes from understanding how it works. The distinction between compulsions of libido and mortido are made in this analysis, and with one important exception, techniques which are equivalent to the management of alcoholism and depression may be employed. The ability to use these approaches is denied by the traditional attitudes of Christianity and psychiatry which condemn without exception all forms of gender and sexually variant behaviour as being disordered lifestyle choices which substitute the sexual act for the gift of life and are in pursuit of lust and immoral acts. It is also of note that the creation of gender identity is just one instance of a generally applicable process. Therefore this investigation provides important general insights into the development of identity and personality in early life.

## 12:9: Later Issues

The failure to take account of the internally generated and physiologically driven processes of early development is the major omission which is addressed in this analysis. It is shown that the creation of the unconscious core elements of identity and personality are driven by these physiological processes acting alone and this means that the traditional social learning and psychodynamic theories can only be used as overlays on what has already been formed. The conflicts themselves predate the conscious mind. What people are aware of are their own later attempts to rationalise and seek cognitively based explanations for the discordances that have already been formed.

It should be noted that this analysis illuminates the principles which underlie the traditional social learning and psychodynamic theories, rather than rejecting them. Girard, Freud and others use cognitively based constructs to explain the characteristics encountered in early development. It is shown in this investigation that the contagion of the internally generated development processes provides the driving forces behind them. The social constructs of the ego, superego and id, for example, may be considered as artefacts which try to explain in rational terms how the brain works, and what has happened in early life. However these are attempts at resolution in which the cognitive abilities are heavily used

They provide very relevant models when they are applied to later life. However it is shown in this investigation that they cannot access what happened during infancy. This is because the cognitive abilities and the neural co-ordination which is needed for that did not exist at the time when this early development took place. Provided these limitations are noted, the traditional theories can be effectively applied to cognitively driven conflicts after a stable balance between the contagious feed-forward processes from early development and the later feed-back processes of cognitive control is approached. That is achieved from around the age of four years. Earlier development is extensively studied in this investigation and it is the continuity and the nature of this transition which supports the argument presented in this analysis that a continuous path of development can now be identified, which extends from the newly born to the end of adult life.

## 12:10: Objectives

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<sup>186</sup> See section 10:4 of this document

When no obstacles are present the path towards transition and gender reassignment seems the obvious course to take. Indeed the consequences of resisting it or preventing it almost inevitably lead to catastrophic collapse. The suicide rates are very high. For some people the path towards transition and gender reassignment is very clear and these people should be given complete support in their pursuit of that goal.

For others major challenges are encountered when their commitments to the life they have built conflict with the sense of gender they know deep inside. There is a wide range of behaviour and the choice of management methods must match the objectives that are sought. The correct management methods should also be used and it is necessary to be realistic about the objectives that are set. This means that the aim of these management methods should never be to deny or to prevent progress towards transition and gender reassignment. Instead they should aim to make a smooth change possible so that if it is needed it can come at the right time, for the right reasons and in a way that minimizes the trauma it creates. If these dynamics are managed correctly, the need for that change may never occur.

Early intervention is also needed. Standard procedures adopted by Gender Identity clinics require clients to take a "Life Test" before gender confirmation surgery is considered. That may be a sensible and necessary precaution, however that also affects any truce that may be sought between the commitments that have been made in the life people have built and the gender they know inside. That should be recognised by the gender identity clinics, but often there are the presumptions associated with a production line approach and this balance may be further destroyed. However in fairness to the gender identity clinics, by the time most people can avail themselves of their services any balance that might once have existed has already been lost,

Conservative approaches to psychiatry and Church theology presume that gender and sexual variation are reward driven lifestyle choices, and their identity driven nature is denied. Reward driven and identity driven conflicts are shown to require management techniques which are almost opposite to one another. Therefore great damage has been done because the wrong methods have been applied. Much of this harm occurs because of the attitude adopted by sections of the Christian Church which employ its traditional theology to condemn all forms of gender and sexually variant behaviour as inherently sinful and disordered acts. That is compounded by the social attitudes in society which have been moulded by this approach.

It is shown that attempts to suppress or to deny these conflicts attack the foundations upon which the concepts of selfhood and personality are based. Therefore these are conflicts that must not be fought, and methods of transcendence and acceptance should be used. Attempting to suppress the legitimate expression of this objective or to enforce its denial through total abstinence destroys the acceptance of the core gender identity that is needed. Some groups, including religious groups and those who promote a "Gay Cure" try to enforce this approach but experience has shown that it should always be presumed to fail<sup>187</sup>. As these are goals of fulfilment, absolute abstinence cannot be maintained and this is why it is essential to manage the dynamics instead. A more detailed description of this approach is given in a separate account<sup>188</sup>.

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<sup>187</sup> Gilchrist, S. (2011): "*Issues on the Sanctity of Same-Sex Relationships*": <http://www.tgdr.co.uk/documents/014B-IssuesOnTheSanctityOfSame-SexRelationships.pdf>

<sup>188</sup> Gilchrist, S. (2013): "*Management Techniques for Gender Dysphoria with particular reference to Transsexuality*": <http://www.tgdr.co.uk/documents/205P-ManagementTechniquesInGenderDysphoria.pdf>

This traditional doctrine has been challenged in this analysis on social, scientific and historical grounds. It is also condemned by much of the present day psychiatric opinion<sup>189</sup>. However instead of taking notice of these challenges, the reaction of sections of the Church has been to reinforce its traditional approach. The argument that males should learn to be men and that females should learn to be women is presented on the grounds that it is divinely ordained. There is no freedom of choice when the compulsions that this attitude creates leads to catastrophic collapse. The same freedom to choose is greatly diminished when the wrong methods of management are applied. The imposition of inappropriate religious doctrines; the failure to account for the duality inherent in gender and sexually variant behaviour; the presumptions of psychology and psychiatry that cognitive abilities inform the processes of learning and development at all times of life and the absence of any consideration of the contagious and internally driven mechanisms which are involved in early development; are the major deficiencies in the present day approaches which are identified in this investigation. It is essential that these issues are addressed.

### 13:0: Discussion and Review

Gender and sexually variant people have been and, always may be, a vulnerable group in society. The sexual abuses and gender coercion which a dominant society was able to enforce on members of a subject one was built into the structure and the cultural values of the first century Roman Empire. The absence of reproductive consequences and the abuses of power for the pursuit of sex all make same sex acts easy targets for the abusers and abuses of sex. From a scientific view it is shown in this investigation that gender and sexual variance is identity driven and a moral duality must exist, which demands the welcome of cross-gender activities and same-sex relationships which are the outpourings of love and faithfulness, while supporting the severe condemnation of those engaged in them for the pursuit of abusive and illicit sex. However from a Christian perspective an absolute priority for the early Church was that of attacking the abuses of sex which the abuses of power in dictatorial first century societies permitted. This condemnation applied particularly to same-sex intercourse, through which subjection and domination in these socially and gender unequal societies were uniquely expressed. Because of the intense challenges this imposed on the early Church, it is hardly surprising that the awareness of this duality was lost. Therefore a major task is that of trying to recover what the Gospel message in the first century meant to people who Jesus taught<sup>190</sup>.

That cannot be done by using the interpretations which the Christian Church gave to the teaching of Jesus. In this investigation it is carried out by conducting an independent examination of the moral social and cultural values first century societies within which Jesus taught. This uses the unconnected resources that are available. An independent critique of these first century societies and the Christian Church has therefore been conducted to which the results of this neurophysiological and psychological analysis have also been applied.

Through this it is shown that this duality in gender and sexually variant behaviour was known to Jesus, and that he incorporated into his own teaching. This means that the present day doctrines result from changes to the theology of the Church. The resulting criminalisation and condemnation of same-sex behaviour has prevented stable same-sex relationships being formed. It also meant that the moral duality in gender and sexually variant behaviour could never be publically

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<sup>189</sup> Gilchrist, S. (2011): *"Issues on the Sanctity of Same-Sex Relationships"*: <http://www.tgdr.co.uk/documents/014B-IssuesOnTheSanctityOfSame-SexRelationships.pdf>

<sup>190</sup> Footnote amended August 2016: Gilchrist, S. (2016): *"Foundations of Science, Sex and Gender Variation in the Christian Church"*: <http://www.tgdr.co.uk/documents/217P-FoundationsSexGender.pdf>

expressed<sup>191</sup>. These prohibitions have led to the traditional teaching of the Christian Church, which condemns without exception all gender and sexually variant behaviour, as being lifestyle choices, which are intrinsically disordered, and are always in pursuit of immoral sex. As a minority group, gender and sexually variant people can be subject to secular scapegoating by society. By condemning all gender and sexually variant behaviour for the misdemeanours of some, Christianity reinforces and gives legitimacy to the scapegoating of minority groups in the societies to which this Gospel is preached. This may be seen in extreme form in some countries in Africa and in the Middle East.

The lack of understanding is another major issue. The doctrines of the Christian Church and the historical presumptions of psychology and psychiatry together presume that the acquisition of gender identity is a socially learned experience. Therefore both deny the reasons for the high degree of trauma that gender and sexually variant people face. That omission is addressed in this investigation, which uses gender dysphoria as a case study which links the neuroscientific and physiologically based processes of development from birth to the cognitively based psychoanalytic approaches which are shown to apply to later life. It is demonstrated that initial development is dominated by these internally generated and physiological forces. They act in a feed-forward manner to maximise the amount of information that is obtained. During the second to the fourth year the feed-back forces created through the acquisition of cognitive abilities increasingly apply moderation and control. As a consequence all future development is characterised by the struggle between the earlier internal, contagious, feed-forward and physiologically driven forces present from birth, which react against the later controlling, feed-back and externally moderated processes of cognitive development in later life. Thus the lifetime tension between these feedforward and adventurous forces of physiology and the feedback and restraining forces of cognition is demonstrated to provide the stimulation whereby the highest achievements of humanity are gained.

Another difficulty in developing this understanding arises because, for most people, the development processes which give rise to them are hidden from the conscious mind<sup>192</sup>. This is considered to be a major reason for the presumptions made by Christianity and the traditional psychological approaches that the development of identity and personality is entirely the output of cognitive activity at all times of life. However that ignores the results of the neurophysiological and psychologically based studies on early development, pioneered by Girard, Dawkins, Gallese and others. No consideration is given to the earlier learning processes that are involved and the presumption that the cognitive development processes act on a blank canvas is incorrect. A major concern for the Christian Church has been over the abuses created by the intensity of the sexual impulse, and it is the same intensity of this drive which led Freud to identify it as the driving force for the psychodynamic theories that he presented. Both of these attitudes have built a deadly combination that has created an undue focus on sexual behaviour, and discouraged any other driving forces from being considered.

These presumptions are challenged in this investigation, which applies the results of this neurophysiological and psychological study to examine how development occurs. It is shown that it is the innate neurophysiologically driven forces of possessive imitation, rivalry and empathy which are present from birth that drive development forward. It is not the strength of the sexual impulse that Freud described. It is additionally demonstrated that the physiological, neurological and psychological aspects of brain development act together to form a finely tuned system in which the

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<sup>191</sup> Promiscuity amongst lesbian and gay people is dealt with separately in this study. See Gilchrist, S. (2011): *"Issues on the Sanctity of Same-Sex Relationships"*: <http://www.tgdr.co.uk/documents/014B-IssuesOnTheSanctityOfSame-SexRelationships.pdf>

<sup>192</sup> At Least for people who do not have to deal with them



maximum amount of individuality, possessiveness, intelligence and inquisitiveness, together with the minimum degree of energy expenditure is created. Much of this development takes place during the first four years of life. By the time a child becomes sufficiently self-aware to question what has happened, the unconscious core components of identity and personality have already been fixed in place. The conflicts which people encounter arise from the attempts to resolve what has already occurred.

### **13:1: The first four years**

It is observed in this investigation that the unconscious core gender identity has become firmly and irrevocably fixed at the latest by the age of three years, however children do not become aware of any congruities before around the age of four years. This early date of formation of this underlying element contrasts with the traditional perceptions which assume that gender identification develops more slowly, and much later, entirely through the actions of the cognitively based systems of learning and development. Therefore identifying the timings and the relative rates of development forms an important part of this study.

Modern theories suggest that brain differentiation begins before birth. It is demonstrated in this investigation that core elements of personality, including basic concepts of gender and sexual identity form before or during the neural transformation period. That takes place around the age of two years. The changes in brain structure and organisation mean that these are unchangeably fixed by the age of three years. Through this it is understood that a constancy of personality is formed. Therefore the processes which lead up to the creation of the core elements of identity and personality are primarily controlled by the physiologically driven forces acting alone. Therefore; instead of acting on the blank canvas which is presumed in traditional approaches, the social learning and psychodynamic theories can only be used as overlays on what has already been formed.

This is part of a tuned process. If the initial development period is too strong or lasts too long the ability to develop a coherent self-identity is damaged or destroyed. On the other hand if the cognitive assessment processes dominate too early or become too great, people increasingly become products of their surrounding environment, and the ability to create the richness and uniqueness of every person's identity decreases.

### **13:2: Development Processes**

It is shown that the physical development of the brain and its neurological capabilities are closely linked. A characteristic common to all of the neurophysiologically based investigations is that development begins with the creation of primitive and isolated components of thought which then start to coalesce. At this time increasingly complex elements are created and at around the age of two years an explosion in cognitive ability occurs.

Much of the research that is currently being undertaken is intended to test the perception that the causes for gender and sexual variation arise through the influences of hormones acting on the brain before birth. There are three objections to this. The first is that it does not explain how genetic or hormonal variation is translated from physical differences into the psychological identification with the gender identity that is created. The second is that the pre-frontal cortex of the brain is still very primitive at birth and the massive advances in cognitive development which are due the great increase in neural interconnection and brain plasticity does not come properly into action until around the age of two years. The third is that the lack of neural integration and the contagious development processes during the first two years of life deny the necessary order that is needed for any global concepts to be formed. This investigation also shows how the maximum possible

*Gilchrist, S. (2013): "Personality Development and LGB&T People: A New Approach"*

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degrees of individuality and human potential are created. Thus from a statistical point of view it might be expected that a proportion of people with gender or sexually variant identities will be created without any external cause.

However empirical evidence shows that there is a birth-related process at work. Studies demonstrate that newly born babies respond to stimuli in different ways according to their sex. The absence of cognitive abilities means that babies of this age have no awareness of the relationship between cause and effect. Significantly this also means that, despite the enormous developments which take place during the first two years, the expectations imposed by others about how babies should behave in the future, and their expectations of the gender that they should relate to, has little effect. Girard has shown that the dynamics involved in these early processes are so strong that any awareness of an original cause becomes lost, or it is so small it cannot be found. Development is also perverse because, once this has taken off in a particular direction it can be difficult to change. These results of Girard are supported by the later work of Dawkins, Gallese and others. The quorum sensing mechanism also follows the direction that the crowd of elementary ideas has taken. Therefore the core sense of gender which is formed is a reflection of the momentum that these development processes have created: it is not a product of rational thought. According to this analysis it is the behavioural differences at birth which set the development of a tribal identity related to gender off in a particular direction. It is the interrogation of this tribal identity during the neural transformation period, which enables the core sense of gender identity to be formed.

This analysis identifies a third phase, when a constancy of personality is created. That occurs between the age of two and three years. It is argued that changes in brain plasticity lock this in place<sup>193</sup>. Around the age of four years the development of neural abilities leads to the formation of a functioning "Theory of Mind". This empowers people to perceive what each individual person considers to be his or her own self-identity by viewing it as if from afar. It is the age when many transsexuals begin to be aware that "something is wrong" with the gender identity they are expected to possess. The relative timings of each of these processes means that many of the early stages in development occur before children are able to use their "Theory of Mind" to make their own assessments. Unless some trauma occurs which brings them to conscious awareness, the conflicts which are created by these processes of early development are likely to remain hidden inside the unconscious mind. Once the genie is let out of the bottle it cannot be easily put back. For some people a late onset of the gender conflict occurs.

### 13:3: Validation

The absence of any case-study which could be used to link the contagious feed-forward processes of early development to the feed-back processes of cognitive control has previously been an impediment to greater understanding. In theory gender identity might be used as a model to examine these processes. The problem with this is that the development of the core gender identity takes place before any conscious awareness can be created. When there is no clash between the results of these two earlier and later development processes, they will simply act together to affirm and strengthen the understanding of gender identity that is consciously created. No direct evidence for the existence of the earlier process will be observed. It is considered that in the traditionally

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<sup>193</sup> Since this document was written much more evidence for the "Domestication of the Brain" and for the neurological processes involved in establishing this constancy has become available. For an account of this see: Gilchrist, S. (2016): "A New Approach to Identity and Personality Formation in Early Life": <http://www.tgdr.co.uk/documents/218P-InfluencesPersonality.pdf>

accepted approaches this disappearance is also why a gradual and later development of gender identification, which is due to the cognitive processes alone, is assumed to take place<sup>194</sup>. That contrasts greatly with the experiences of gender dysphoria, where strong conflicts certainly occur and these are apparent from an early age. In these, people develop a core sense of gender identity which is contrary to their biological sex, and this unconscious sense of core gender identity has been shown to be fixed at the latest by the age of three years<sup>195</sup>. This means that gender dysphoria becomes a valid test to model how development proceeds and that this can be applied before, during and after neurophysiological transformation occurs

### 13:4: Management

It is shown in this analysis that considerable harm may be done if the incorrect management methods are used. Earlier in this document has been established that techniques which are equivalent to the management of alcoholism and depression should be employed. These are well known. However there is one major difference. In conflicts of mortido, such as those of depression and addiction, abstention is used as a technique to limit the harm that is created. In conflicts of libido, abstention instead acts to limit the fulfilment of life. Therefore attempting to use this to challenge the compulsions associated with gender dysphoria also denies the hope of fulfilment that might otherwise be found. By definition that is more difficult to do; and it means that absolute commitment is required.

Gender reassignment should never be prevented when that is the clear outcome for the conflicts that are fought. However gender reassignment for others may be problematic. Often it is very strongly resisted and suppressed, not just because of the guilt caused by the condemnation of

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<sup>194</sup> In the standard and conventionally accepted gender studies it is shown that in young children, their initial concepts about gender are quite flexible. They do not begin to notice and to adopt gender-stereotyped behaviour until the age of two or three. A few years later, their concept of gender becomes quite rigid. Before the age of five, children do not seem to think that gender has any permanence. A pre-school child might ask his female teacher whether she was a boy or girl when she was little, or a little boy might say that he wants to grow up to be a mummy. Toddlers think that changing clothes will also change gender. It is not until children understand that boys have penises and girls have vaginas that they know that changing clothes does not change gender. Research suggests that children's concept of gender develops gradually between the ages of three and five. Once children begin to think about gender as a stable trait, they also start to incorporate gender into their own identity. From around that time they become motivated to relate to other members of their group, and to seek out gender-related information, often becoming very strict about adhering to gender stereotypes. When they are between seven and ten years of age children become more relaxed about maintaining these gender stereotypes. This is therefore a process of self-discovery and self-awareness. These require cognitive abilities to be present. Traditional development theories presume that these processes act on a blank canvas and that gender identity is entirely created through the behaviour predicted by the social learning and psychodynamic development theories. This analysis shows that the elementary core gender identities are created by pre-cognitive processes and that the conscious allegiance to a gender identity is the result of a struggle between these unconscious and conscious conflicting demands.

<sup>195</sup> Early medical involvement in the management and treatment of transgender and intersex people was made on the assumption that the standard description of the development of gender identity, as is described above, applied. Social learning theories were used and it was presumed that a blank canvas was available before these gender associations could be learned. The experience of treating gender variant people showed that this was not the case, and gender identification was firmly fixed at a much earlier age. Furthermore they came to the conclusion that it was impossible for the core gender identity to be changed any later than three years of age. This still did not fit the actual circumstances and one investigator (Stoller) tried to adapt Freud's theory of psychodynamics by presuming that the desired state was female, and not male, in order to bring this threshold down to an age of between one and two years. However he still tried to apply the psychodynamic and social learning theories on this basis. This persistence had disastrous consequences. Stoller and Money continued to treat and report the results of their gender and sexually variant people on the presumptions that social learning theories applied, after their own results had challenged the conclusions that were made. That led to the discrediting of their work. Work on intersex children, who were reassigned/assigned to a particular gender soon after birth also showed that considerable trauma could occur. This has led to the current practice of deferring surgery on intersex children until they could decide for themselves, the gender identity that is correct. For more information on this see section 10:1 and 13:2 of this account.

others, but also through the danger of destruction to relationships and other values that are most cherished in the life that has been built. The attrition that is caused by fighting these battles too often leads to breakdown and collapse. Instead of trying to deny this core sense of belonging, it is considered that that it is necessary to create an inclusive identity, which values it and welcomes it instead. This welcome can be used to give a secure base. Instead of seeking and blaming some cause, which may never be found, attention should be paid to managing the dynamics. Since fighting these conflicts brings trauma and collapse, the freedom to change direction should always be kept open so that a smooth and orderly transition can be made, should this ever be replied. The creation of self-understanding and self-esteem is another important element that should be supported. For those who are trying to maintain this course, collapse often occurs because these battles have been lost. It is argued in this analysis that by calming these dynamics the need for transition is less likely to occur, and if the need for it ever does come, then a managed transition can also be made.

### **13:5: Cognitive Continuum**

In psychology and psychiatry the cognitive continuum theory defines intuition and rational analysis as two modes of cognition or recognition that can be placed at the ends of a continuum. Intuition refers to rapid, unconscious processing and low control, and analysis refers to slow, rational, conscious and controlled thought. Cognitive capabilities require the ability to work with information in a meaningful way; to apply new information to that which has already been gained, to perform preferential changes, use reasoned procedures to alter opinions and to search for rewards. It is shown in this investigation that two types of conflict are encountered. The identity driven conflicts are characterised by the rejection of what is not successful or is found to be wrong, while in reward driven conflicts the search is for a goal. Two separate learning processes are also identified. One is through the autonomous undirected neurological processes of inhibition, and the other is through the actions of discernment, where decision making occurs. If a cognitive continuum involving thought and action is understood to exist, then other cognitive continua must be expected which independently act across function and time. There are particular characteristics associated with gender identity conflicts. The first is the indirect nature of the goal that is pursued. The second is the contrast between the extremities of the conflict and the modesty of the demands. The third is the intense but the very specific nature of the disturbances that occur. The fourth is the unwelcome nature of the conflict itself. The fifth is the failure of determination, willpower and suppression to conquer its demands. The sixth is the lack of influence of the expectations of rearing and the seventh is the bipolarity that is encountered. All of these strongly suggest that none of the cognitive continua are active at this time. That is in line with the results of this analysis which argues that cognitive abilities cannot effectively develop before the neural integration that is found at the time of the neurophysiological transformation period occurs. Nevertheless the psychodynamic theories expect that there is some form of continuum between gender related experiences on the one hand and sexually related experiences on the other. However it is shown in this investigation that the effects of gender variation and sexual variation are independent of each other. No evidence for such a continuum is found.

### **13:6: Impact and Scope**

It is concluded by this analysis that the conflicts which are associated with gender identity must be seen as the symptom of the failure to build a coherent sense of self identity, rather than the cause. It also means that for everyone the development of their own gender identity proceeds in the same way. Transsexuals develop a gender allegiance which is contrary to their biological sex, but this is at least as firmly held as those for whom their gender identity and allegiance follow a normal path.

Indeed it may be argued that the gender allegiance which is felt by transsexuals should be even stronger because it has had to be fought during these early development processes<sup>196</sup>. Once established, the need to develop a constancy of personality permanently fixes these unconscious core elements of personality and identity in place.

In this investigation it is shown that the formation of the core gender identity is just one example of a generally applicable process. Therefore it should be expected that other core aspects of personality and identity form in a similar way. Arguments about the relative influences of nature and nurture abound when early development is considered. Although this approach allows for the presence of genetic and endocrinal variations, it does not require them. Therefore in the case of autism for example, the genetic influences might be large, in the case of gender and sexual variation, a pre-disposition may be encountered, in the case of the formation of tribal identities within communities of people, there may be none<sup>197</sup>. The effects of intersex, endocrinal effects and brain differentiation are examined in this investigation. It is shown that a significant but restricted correlation is found. Attempts to reassign the sex of babies at or close to birth, who are intersex or who have genital malformations, has resulted in great trauma for some in later life. This has led to the policy that all such surgery should be deferred until the individual concerned is able to decide.

## 14:0: Conclusions

This is an extended analysis which begins by examining the early development of personality and identity. It aims to link the neuroscience of early development to the later developing cognitive processes by using gender dysphoria as a case study to examine the stages that occur. It is shown that key elements involved in this transformation are associated with a major and rapid development of neural capabilities around the age of two years.

### 14:1 Formation

This investigation shows that initial development is dominated by internally generated and physiological forces which act in a feed-forward manner to maximise the amount of information that is obtained. It is established that the unconscious core elements of personality and identity form before or during this neurophysiological transformation period, and that these are created by the actions of the innate, internally focussed and contagious physiological driving forces on their own. During the second to the fourth year it is shown that the externally focussed feed-back forces created by the development of cognitive abilities increasingly apply moderation and control.

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<sup>196</sup> The bipolar division into male and female is a strong element in society. Those who advocate social learning theories may argue that simply bringing a child up in a gender transcendent or neutral environment would result in the loss of this bipolarity. However these contagious internally generated self-reinforcing processes of early development and the consequences of the very specific learning capabilities at this time are considered to lead children to identify themselves in terms of male and female tribes. This is independent of the expectations of learning which others apply. That identification is considered to be led by behavioural differences between boys and girls which are present from birth. This is where genetic influences may play a role. With the development of cognitive processing this tribal identity is turned into the core gender identity which becomes locked in place at the latest by three years. From this time children very strongly reinforce the gender differences between them. Gender bipolarity therefore is not simply a matter of social learning, and these precepts of polarity become embedded in society as well. The developing attitudes within society have led to an increasing fluidity in social attitudes to gender and sexual variation and that is reflected in the attitudes of gender and sexually variant people as well. Many more gender and sexually variant people are now refusing to identify themselves according to these binaries. That should be welcomed by all.

<sup>197</sup> See section 5:1 of this document

This means that two separate differently directed and potentially conflicting developmental processes are involved. Those conflicts which arise from discords before the neurophysiological transformation period are demonstrated to have different characteristics from those which form after it. In this investigation the distinction between identity driven and reward driven conflicts and characteristics is made. It is argued in this analysis that the stimulation provided by this conflict enables the highest achievements of human potential and individuality to be created. However the penalty that is paid for this is that there is the greater potential for inconsistencies to occur.

By the age of three years it is shown that the unconscious core elements of identity and personality have been fixed in place. This is matched by neurophysiological changes in the brain. The reasons for this are examined, and it is argued that at this time a constancy of personality is created. Children do not reach the degree of cognitive awareness that they need to be aware of any inconsistencies until they reach the age of around four years. The conflicts which people consciously encounter arise from their later attempts to resolve what has already occurred.

It is demonstrated that the physiological, neurological and psychological aspects of brain development act together to form a finely tuned system in which the maximum amount of individuality, possessiveness, intelligence and inquisitiveness, together with the minimum degree of energy expenditure is formed. The timings of these processes are also critical. If the initial development process is too strong or lasts too long the ability to develop a coherent self-identity is damaged or destroyed. On the other hand if the cognitive assessment processes dominate too early or becomes too great, people increasingly become products of their surrounding environment, and the ability to create the richness and uniqueness of every person's identity decreases. After these more global concepts have been created, the fragmented and contagious nature of the development processes means that there is still little integration between them. Inconsistencies or discords that are created do not have an impact before children have the ability to challenge what has occurred. That ability is enabled through the development of children's own theories of mind. It is concluded in this analysis that the conflicts which arise from these inconsistencies, including those which involve gender and sexual variation must be seen as the symptom of the failure to build a coherent sense of self identity rather than the cause.

In line with the neuroscience based studies of Gallese, Dawkins, Girard<sup>198</sup> and others it is considered that during early development individual elements of thought are independently created and that the most successful of these later combine to enable more global concepts to be formed. In this investigation much of this is believed to take place during the neurophysiological transformation period, when quorum sensing processes are involved. As a consequence the subconscious core elements of personality and identity that are created follow the direction that the crowd of elements have taken: they are not the product of rational thought.

That contrasts with later development where the cognitive aspects of reasoning, perception and intuition are involved. It is demonstrated in this analysis that there are two distinct and differently directed processes involved in creating self-identity. When the two processes are in harmony little difficulty may be expected. However when they contradict each other, strong trauma can be found. It is demonstrated that the identity driven conflicts arise when the core elements of identity that were first created are at war with the later forming elements the cognitive processes demand. The consequences of this are well known even though a different approach is adopted in this investigation since it describes how the types of conflicts that are conventionally associated with personality disorders can be separated from those where perversion or disruption occurs.

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<sup>198</sup> Girard identified the same form of driving mechanism. However he used cognitively based constructs to explain their actions

## 14:2: Gender and Sexual Variation

It is also shown that the characteristics and conflicts associated with gender and sexual variation are identity driven, Therefore as wide a range on moral attitudes, beliefs, inclinations and responsibilities is to be found in these groups, which include gender and sexually variant people, as those which occur in the population at large. This is in contrast to the later forming reward driven characteristics and conflicts, where behavioural motives are shown to be involved. A moral duality is therefore encountered. This demands the welcome of same-sex and gender variant behaviour which involves relationships that are given in love and faithfulness, while condemning those engaged in for abusive and illicit sex. The existence of that moral duality is denied by the traditional teaching of the Christian Church. However the knowledge of that moral duality is evident to others in the lives of gender and sexually variant people. The results of this investigation now offer a proof of this moral duality. This is used in the theological part of this investigation to challenge the traditional teaching of the Christian Church<sup>199</sup>.

Gender dysphoria is often manifested through the overwhelming desire for gender reassignment. However when the motives for this are examined it is often not gender that is dominant concern: it is the need for people to live their lives in ways that are true to themselves. Behaviour is not identified as a major driving force, and when the goal of reassignment is achieved, concern with gender issues become nothing more than an everyday part of life. The characteristics of identity driven conflicts are examined and it is demonstrated that these match the experiences of transgender people. Although the term gender reassignment is frequently used, it is a term that many transgender people are unhappy with. People frequently describe their experience as “Being born into the” wrong body. Surgery and gender reassignment is sought to correct a mistake made before birth and the term gender confirmation is preferred. Although behavioural differences between the sexes, are found only hours after birth, that explanation is considered to be inadequate in this investigation because of the fragmentation and contagion involved. According to this analysis it is the behavioural differences at birth which set the development of a tribal identity related to gender off in a particular direction. It is demonstrated that the absence of cognitive abilities and the momentum of the process make it possible for a core sense of gender identity which is independent of the expectations of rearing to be formed. It is the interrogation of this tribal identity during the neural transformation period which enables the core sense of gender identity to be created. That is then fixed and confirmed by the massive degree of brain plasticity which occurs at this time. This means that for everyone the core gender identity; atypical or not, is formed in the same way. Transsexuals develop an identity which is opposite to their biological sex, but this is at least as strongly held as those for whom biology and psychology correspond. Indeed it might be argued that this is stronger, because it has to be fought along the way. Issues of nature and nurture are considered. In a process where the maximum possible degree of individuality and human potential is created it is shown, from a statistical point of view alone, that a proportion of people who have gender and sexually variant identities will be formed without any internal or external cause.

The relationship between statistical influences and birth influences is discussed in this investigation. Examination of the effects of gender reassignment carried out on infants soon after birth show that a significant but incomplete correlation with birth influences is found. It should be noted that the formation of gender identity is one aspect of a generally applicable process and other core elements will be formed in a similar way. The development processes which are described in this investigation

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<sup>199</sup> Footnote amended August 2016: Gilchrist, S. (2016): “*Foundations of Science, Sex and Gender Variation in the Christian Church*”: <http://www.tgdr.co.uk/documents/217P-FoundationsSexGender.pdf>

allow for the effects of genetic and endocrinal influences, however it does not require them. In the case of autism for example the genetic influences may be high; with gender dysphoria a predisposition is found. In tribal conflicts between different communities there may be none<sup>200</sup>

### 14:3: Limitations

The presumption that cognitive capabilities are involved in development at all times of life is challenged in this analysis. Conscious awareness is shown to develop as the capacity for self-assessment increases, and that capability is not sufficiently effective to challenge the identities that are formed until about the age of four years. Therefore children are not consciously aware of the original discordances of identity that are the actual source of any conflicts they face. What children are consciously aware of instead comes from their own attempts to use their cognitive abilities in order to rationalise and resolve the conflicts and discords that have previously occurred. Freud and Girard create analogies and constructs of identity and rivalry which seek to explain the nature of these underlying conflicts and the driving forces behind them. However the way they interact with each other is still described in cognitive terms. These presumptions begin to fail at ages less than four years. At around the age of two years, instead of acting on the blank canvas which is presumed by the psychodynamic and social learning theories, it is demonstrated in this investigation that these social learning and psychodynamic theories can only be used as overlays on what has already been formed.

It is shown that the issues of gender dysphoria and on gender and sexual variation are just specific examples of generally applicable processes. It is demonstrated in this investigation that identity driven conflicts and reward driven conflicts require management techniques which are almost opposite to one another and great harm can be done if the wrong techniques are applied. The methods of management recommended in this analysis for these identity driven conflicts are already well known, because they are applied to issues such as depression, addiction and in other areas where personality disorder occurs. However these are the same processes which are also intimately involved in creating the greatest degrees of richness and individuality and for ensuring that the highest possible standards of human potential are achieved. In this analysis a distinction is made between conflicts and compulsions of libido and mortido. Gender and sexual variation both act on the side of libido for, when they are acted on responsibly, the greatest fulfilments in life can be found. Strategies for management are considered. Instead of trying to fight and suppress the sense of core elements of identity and personality it is shown that methods of inclusion, acceptance and transcendence must be used.

### 14:4: Expectations

The conclusions of this investigation are far from what much of present day opinion expects. The traditional theology of the Christian Church condemns all forms of gender and sexual behaviour, irrespective of their motives and purpose as lifestyle choices which are disordered and in pursuit of immoral sex. The existence of the duality which this investigation shows is inherent in gender and sexually variant behaviour is therefore denied. This condemnation of the behaviour of every gender and sexually variant person for the misdemeanours of some has led Christianity to give legitimacy and support to the secular scapegoating of all gender and sexually variant people that takes place in many parts of the world. In some cases extreme penalties are enforced. Not only does this impute the integrities of those gender and sexually variant people who seek to live up to their religious

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<sup>200</sup> The fragmented nature of early development means that at this time interpersonal relationships cannot be separated from intrapersonal ones. As a consequence the same development processes are involved. See section 5: of this document for a more complete description.



beliefs and the highest moral standards of society it also means that the wrong methods of management are applied. It is imperative that these misunderstandings are comprehensive addressed.

#### **14:5: Continuity**

The major change in this approach is the replacement of Freud's perception that the sexual impulse provides the driving force of sufficient intensity to drive development forward. This investigation uses the results of neuroscientific research, which shows that the contagious internally created driving forces that are present from birth, propel development forward at all times in life, and that these are only held in check by the restraining forces of cognitive development which later come into effect. However children are unaware of any discords that are created during early development. The conflicts which children become aware of are driven by their subsequent attempts to rationalise and give reasons for the inconsistencies that have already occurred. The cognitively based explanations provided by Girard, Freud and others are therefore ways of providing rational explanations for the impact of the driving forces that had earlier been formed.

This investigation illuminates these traditional theories. It does not reject them. Provided the presumption that cognitively based processes are required to guide development at all times of life is removed, and the role of the internally driven physiological forces is recognised, these theories can be applied to later development. For example Girard's cognitively based descriptions of mimesis and rivalry to account for the actions of the internal driving forces; and his identification of the scapegoat mechanism as a means of managing them, may be validly applied to the subsequent management of these conditions. The application of these principles forms an important part of other work that the author is engaged in. However for the understanding of their origins, the analysis presented in this account must be employed. Freud uses psychoanalysis to examine the unconscious mind. Provided this is used to explore the characteristics which the physiological driving forces have created, and not just the disruptions of later development, which Freud presumes, there is much that might be gained from this approach,

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