

## Till Death do us Part?: Marriage in Light of the Evolutionary Sciences

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### Abstract

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With Gay Marriage and Civil Unions, the meaning of marriage has become a contested issue. In this article, the relationship between evolutionary tendencies and culture, and the inter-relationships among cultural, personal, and religious perspectives on marriage are analyzed. The thesis is that all understandings of marriage are cultural, including those within religious traditions.

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Enduring marriages, rooted in perfect friendship and virtue,<sup>1</sup>exquisitely executed, are rare, though long sought after. The list of obstacles and dangers for marriage in western culture is long and the problematic consequences of unstable unions are manifest and seemingly ubiquitous. Adultery, divorce, pre-nuptial agreements, serial marriage, step-families, “dead-beat” dads, teen pregnancy, youth violence, unwed mothers, problematical annulments within marriage tribunals, the economic devastation of women and children – these are just some of the consequences attributed to the demise of secure marriages.

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<sup>1</sup>Aristotle wrote, “Perfect friendship is the friendship of [those] who are good, and alike in virtue; for these wish well alike to each other qua good, and they are good themselves. Now those who wish well to their friends for their sake are most truly friends; for they do this by reason of their own nature and not incidentally; therefore their friendship lasts as long as they are good – and goodness is an enduring thing” (Aristotle, *Nicomachean Ethics*, trans. Martin Ostwald [Indianapolis: The Bobbs-Merrill Company, 1962], Bk. 8, Ch. 3).

The reasons for the decline and attendant problems are variously asserted to be bad parenting, promiscuity, mobile culture lacking in community roots,<sup>2</sup> over-romanticism about being in love, the “seven-year” itch, irresponsible media, pornography, and decline in morals and virtue in general. Regardless of the divergent opinions concerning the sources and causes of the current situation, nearly all would agree that life-long marriage as a cultural institution is gravely ill if not in death-throes.

How should those within religious traditions view the quandary? In this century, religious leaders have availed themselves of tools for understanding marriage absent in the past. Beyond doctrine, spirituality, and moral reasoning, contemporary moral theologians and canon lawyers utilize anthropology, sociology, and, especially, psychology. The problems of spouses are no longer seen as only moral but psychological and within cultural parameters. However, these newer perspectives have not changed the fundamental understanding of marriage. Marriage continues to be viewed as a natural human state within the Abrahamic traditions of Judaism, Christianity, and Islam. For some, marriage is *prima facie* natural, elevated to the sacramental<sup>3</sup> by Christ.

While the human sciences have been brought to bear on the understanding of marriage within religious traditions, the biological and evolutionary sciences and their understandings of the vital level have had little effect on religious viewpoints, particularly regarding the belief that monogamous, life-long marriage is “natural.” This, despite the fulfilment of Darwin’s prophecy at the end of his classic treatise, *On the Origin of Species* (1859): “In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation.”<sup>4</sup>

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<sup>2</sup>It is also noteworthy how many men are being induced to migrate on various counts, and are thereby changing their manner of life. Thus a man’s ties with his fellows are constantly being multiplied, and at the same time “socialization” brings further ties, without however always promoting appropriate personal development and truly personal relationships” (*Gaudium et Spes* [6]).

<sup>3</sup>Bernard Lonergan, S.J., wrote of the sacramental nature of marriage: “[M]arriage has become the sacrament of the union of Christ and his church. It is the efficacious sacrament of the realization of another self in Christ, and its ascending finalistic drive, its primary reason and cause, is to the very summit of Christian perfection in which in due order all members of the mystical body are known and loved as other selves” (Bernard Lonergan, S. J., “Finality, Love, Marriage,” *Collected Works of Bernard Lonergan*, Vol. 4, [Toronto: University of Toronto Press, 1988], 34).

<sup>4</sup>Cited in *Evolutionary Psychology: The New Science of the Mind*, David M. Buss (Boston: Allyn and Bacon, 1999), xix. Moreover, Darwin asserted, “He who understands baboon would do more towards metaphysics than Locke,” (P. H. Barrett, P.J. Gantrey, et al., ed., *Charles Darwin’s Notebooks, 1836-1844* [Cambridge: Cambridge University Press, 1987]). Cited in Matt Ridley, *The Origins of Virtue: Human Instincts and the Evolution of Cooperation* (New York: Penguin Books, 1996), 86.

In this article, we will apply the evolutionary sciences<sup>5</sup> to the issues of marriage within the Christian religious tradition. We will look at marriage from an evolutionary standpoint and try to assess the problems and confusions so evident to all. We will demonstrate that the evolutionary sciences allow for unprecedented insights into human behavior and, particularly, marriage. If religious traditions are to understand and support marriage, we believe it is necessary to recognize clearly its relationship to our specific, evolved structures and proclivities for mating. Further, we will demonstrate how cultural mating forms, that is, marriage in its many manifestations, support human vital drives while incorporating values from both ethics and authentic religious traditions. Finally, we will draw conclusions for a synthetic view of marriage for Christian traditions based on the hierarchy of mating activities and strategies that flow from the vital, natural level of evolved human pairing, through the cultural level, the existential, personal level, to the apex of understanding of marriage in authentic religious and sacramental understandings of marriage.

## 1. Marriage and the Evolutionary Sciences

The manifold forms of marriage – polygyny, polyandry, monogamy, serial monogamy, monogamy with concubinage – that developed over time and in diverse places make evident the cultural nature of marriage.<sup>6</sup> In evolutionary terms, marriage is a cultural “mating strategy.” A mating strategy concerns one’s drive and efforts to enhance survival in passing on one’s genes. Biological scientists have amply demonstrated that humans have, like all biological organisms, brains with structured architecture that predisposes us to pass on our genes through mating.<sup>7</sup>

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<sup>5</sup>We will substantiate the arguments using evidence from other sciences, *e.g.*, neuroscience, cognitive psychology, developmental psychology, archeology, paleontology, economics, and sociology where appropriate. We will consciously acknowledge that a “biological explanation should invoke no factors other than the laws of physical science, natural selection, and the contingencies of history,” (Donald Symons, “On the Use and Misuse of Darwinism in the Study of Human Behavior,” in *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, Jerome H. Barkow, Leda Cosmides, & John Tooby, ed. [Oxford: Oxford University, 1992], 137).

<sup>6</sup>For an overview, see Joseph Martos, *Doors to the Sacred* (New York: Doubleday, 1981), Ch. 2.

<sup>7</sup>Dean Hamer and Peter Copeland write of our genetic predisposition to procreation: “To guarantee their survival, the genes found a clever trick. Instead of appealing to our higher sense of calling, or our duty to continue the human race, the genes made sex feel good, real good. Genes code for millions of touch receptors in the genitals and for the nerves that connect them to the brain, the most important sex organ. In the somatosensory cortex, the part of the brain linked to the genital area is larger than any other, which is why the genitals are so delightfully, exquisitely sensitive to the touch. Other genes code

According to John Tooby and LidaCosmides, the human psychological architecture is a structure containing “many evolved mechanisms that are specialized for solving evolutionarily long-enduring adaptive problems, and these mechanisms have content-specialized representational formats, procedures, cues, and so on. These richly content-sensitive evolved mechanisms tend to impose certain types of content and conceptual organization on human mental life<sup>8</sup> and, hence, strongly shape the nature of human social life and what is culturally transmitted across generations.”<sup>9</sup> Thus, “social life” and culture are not independent of evolved mechanisms.

Evolutionary scientists assert that human beings have evolved mechanisms: “[T]he modern nature-nurture debate is about the character of evolved mechanisms... Does the mind consist of a few, general purpose mechanisms, like operant conditioning, social learning, and trial-and-error induction, or does it also include a large number of specialized mechanisms, such as ... mate preference mechanisms ...; sexual jealousy mechanisms ...; mother-infant emotion communication signals ... and so on?”<sup>10</sup> The human mind has been specialized, through evolution, to meet particular adaptive problems but also that “[t]he heterogeneous mechanisms comprising our evolved psychological architecture participate inextricably in all cultural and social phenomena and, because they are content-specialized, they impart some contentful patterning to them.”<sup>11</sup>

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for the flood of hormones that are released during pregnancy and at childbirth, infusing the mother with warm feelings toward her child. Still other genes, presumably in the primitive limbic part of the brain, help make us receptive to the social interactions and signs of mutual attraction that we feel instinctively and now call love” (Dean Hamer and Peter Copeland, *Living with Our Genes: Why They Matter More than You Think* [New York: Anchor Books, Doubleday, 1998], 163).

<sup>8</sup>Steven Pinker, of MIT, writes, “The mind is a system of organs of computation, designed by natural selection to solve the kinds of problems our ancestors faced in their foraging way of life, in particular, understanding and outmaneuvering objects, animals, plants, and other people. The summary can be unpacked into several claims. The mind is what the brain does; specifically, the brain processes information, and thinking is a kind of computation. The mind is organized into modules or mental organs, each with a specialized design that makes it an expert in one arena of interaction with the world. The modules’ basic logic is specified by our genetic program. Their operation was shaped by natural selection to solve the problems of the hunting and gathering life led by our ancestors in most of our evolutionary history. The various problems for our ancestors were subtasks of one big problem for their genes, maximizing the number of copies that made it into the next generation” (Steven Pinker, *How the Mind Works* [New York: W. W. Norton & Co., 1997], 21).

<sup>9</sup>*The Adapted Mind* 33-34.

<sup>10</sup>ibid 39.

<sup>11</sup>ibid 121. Further, Tooby&Cosmides write, “Indeed, models of psychological mechanisms, such as social exchange, maternal attachment, sexual attraction, sexual jealousy, the categorization of living kinds, and so on, are the building blocks out of which future theories of culture will, in part, be built ...” (121).

As Stephen J. Pope writes, however, "Recognizing that the human mind has adaptive features does not imply that all behavior is adaptive. Behavior as such did not evolve – 'what evolved was the mind,'<sup>12</sup> a complex functional system composed of 'psychological faculties or mental modules' adapted to a vast array of specialized activities."<sup>13</sup>

In order to understand marriage, the most significant "contents" of our biological architecture are those information-processing mechanisms specialized to solve particular adaptive problems such as mate selection, sexual attraction, sexual jealousy, family relations, parental attachment, social exchange and cooperation.

More particularly, the most relevant "contents" regarding marriage are human "short-term" and "long-term" strategies for mate selection. Short-term strategies concern pregnancy<sup>14</sup> and care of offspring until independent viability; this is not so true for men in short-term strategies, as we will note below. Long-term strategies – life-long marriage being one – promote survival and transmission of genes through multiple offspring and into subsequent generations. Either strategy may be dominant depending on circumstances and they differ for males and females. In general, while both men and women invest heavily in children in long-term mating or marriage, males compete for the higher investing females, which can lead to violent confrontations; females, on the other hand, tend to be discriminating and parsimonious in their sexual openness to men because women have greater obligatory parental investment.<sup>15</sup>

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<sup>12</sup>See Steven Pinker, *How the Mind Works* 42.

<sup>13</sup>Stephen Pope, *Human Evolution and Christian Ethics* 301 (Cambridge University Press, 2007). *Ibid.*, Buss, 27.

<sup>14</sup>See *Evolutionary Psychology* 103. Buss notes that men produce millions of sperm; replenished at a rate of roughly 12 million/hour. Women produce a lifetime supply of approximately 400 ova. It follows that women have a limited capacity for having children, while men can potentially reproduce every three minutes. Buss writes, "Over a one year period, an ancestral man who managed to have short-term sexual encounters with dozens of women would likely have caused many pregnancies. An ancestral woman who had sex with dozens of men in the course of the same year could only produce a single child (unless she bore twins or triplets)" (*Evolutionary Psychology* 162).

<sup>15</sup>Hamer and Copeland write, "As members of a species, men and women share the same goal of reproducing. As genders, however, men and women have very different ideas about how to achieve that goal. The difference is the difference between sperm and egg. Put simply, men behave like sperm, which are cheap and abundant; their best strategy when dealing with an egg is to find it, fertilize it, and forget it. Women behave like eggs, which are rare and valuable and which, once fertilized, require a substantial investment of time and resources in child care, their best strategy is to be picky, to find

Therefore, from an evolutionary standpoint – taking into account the different strategies observed – no marriage may be predicted to be immune to problems: “There will always be a battle between the sexes because men and women want different things. Men want women and women want men.”<sup>16</sup>

The differing evolutionary architecture and content of males and females lead to different adaptational tendencies in males and females.<sup>17</sup> For instance, males tend to be more interested in physical attributes, proportion,<sup>18</sup> symmetry and youth<sup>19</sup> in prospective partners than do females.<sup>20</sup> Thus, males tend to be more visually stimulated<sup>21</sup> than females.<sup>22</sup> This accounts well for the tendency of males to “pornography.”

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sperm from a man who will help with the child, and to ignore other potential mates” (*Living with Our Genes* 163-164).

<sup>16</sup>George Burns (cited by Buss, *Evolutionary Psychology* 312).

<sup>17</sup>“Men are programmed to seek more partners and sexual novelty; women are ‘serial monogamists,’ seeking mates who will remain long enough to raise offspring. Women want emotional attachment and financial security not because that is what they are taught but because it helps the species survive” (*Living with Our Genes* 10).

<sup>18</sup>Buss writes, “Healthy, reproductively capable women have WHRs [waist to hip ratios] between .67 and .80, whereas healthy men have a ratio in the range of .85 to .95. Abundant evidence now shows that the WHR is an accurate indicator of women’s reproductive status. Women with lower ratios show earlier pubertal endocrine activity. Married women with higher ratios have more difficulty becoming pregnant, and those who do get pregnant do so at a later age than women with lower ratios. The WHR is also an accurate indication of long-term health status. Diseases such as diabetes, hypertension, heart attack, stroke, and gallbladder disorders have been shown to be linked with the distribution of fat, as reflected by the ratio, rather than with the total amount of fat per se” (*Evolutionary Psychology* 144).

<sup>19</sup>Buss writes, “‘Average’ and symmetrical faces are more attractive to both sexes. Because physical asymmetries can be caused by parasites, therefore, the degree of asymmetry can be used as a cue to the health status of the individual and an index of the degree to which the individual’s development has been affected by various stressors. Less symmetrical people are considered less attractive. Older people’s faces are far more asymmetrical than younger people’s faces, so symmetry also provides another cue to youth. Facial symmetry is positively linked with both psychological and physiological health indicators” (ibid 141).

<sup>20</sup>Thus, that males seek younger females for their reproductive fitness goes far to making sense of teen pregnancies and “unwed mothers.”

<sup>21</sup>This accounts well for the tendency of males to “pornography.”

<sup>22</sup>Buss writes, “Research conducted in Japan, Great Britain, and the United States showed that men have roughly twice as many sexual fantasies as women (Ellis & Symons, 1990; Wilson, 1987). When asleep, men are more likely than women to dream about sexual events. Men’s sexual fantasies more often include strangers, multiple partners, or anonymous partners. ... Men focus on body parts and sexual positions stripped of emotional content. Male sexual fantasies are heavily visual, focusing on smooth skin and moving body parts. ... Women emphasize tenderness, romance, and personal involvement in their sexual fantasies. Women pay more attention to the way their partner responds to them than to visual images of their partner (Ellis & Symons, 1990)” (*Evolutionary Psychology* 173). Further, more men than women subscribed to *Playgirl* magazine (see <http://en.wikipedia.org/wiki/Playgirl>, accessed 02/10/2012).

Females, on the other hand,<sup>23</sup> tend to seek resources in male partners more than youth or symmetry. In fact, while males' resources are often *the* key criterion for mate selection, females display a host of adaptational preferences for mates. These criteria are evolutionary; women select mates who are able to protect them and potential children from physical threats. Indicators of this potency are size (height), strength, signs of bravery, and athletic ability – *viz.*, sports figures, racecar drivers, and “he-men” in general. More still, women select mates with resources capable of investment in a long-term relationship and potential offspring. Men display the probability for these resources through good jobs or financial prospects, social status, older age, ambition and industriousness. In addition, women seek mates who are willing to invest emotional resources as evidenced by dependability and emotional stability, kindness, love and commitment cues, and positive interactions with children (potential good parenting skills). Finally, women tend to choose mates who are compatible, evidencing similar values, similar ages, and similar personalities.<sup>24</sup> Thus, while male strength and health are certainly attractive to females and tend to be signs of genetic fitness, they – apart from *resources* – do not signal what females are looking for in long-term pairing.

Thus, the strongest indicators that a quasi-pair bond will be initiated are the male's resources and the female's attractive, youthful features, signaling fertility.

While these long-term tendencies are carried into the mating strategies of the sexes, it is most notably males' and females' short-term strategies that offer the principal clues to the problems for marriage today. The empirical evidence is not only physiological, but also psychological and behavioral. Notably, these physiological, psychological, and behavioral data can increase our understanding of adultery and other conflicts within marriage.

That is, while adultery and conflict are often categorized as moral issues, evolutionary psychologists have revealed that their roots are prior to our deliberative reasoning.

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<sup>23</sup>“For most sexually reproducing species all conspecifics of the other sex are not equally valuable as mates: that is, they differ in ‘mate value.’ In many species selection has produced mechanisms to detect potential mates of high mate value. In other words, just as the taste of fruit varies with food value, in a natural setting, sexual attractiveness varies with mate value” (Donald Symons, cited by Bruce J. Ellis, “The Evolution of Sexual Attraction: Evaluative Mechanisms in Women” in *The Adapted Mind* 267).

<sup>24</sup>See *Evolutionary Psychology* 105.

Regarding infidelity, David M. Buss writes that there are three male physiological traits that point to non-exclusive sexuality across our long evolutionary history – testes size, variations in sperm insemination, and different sperm morphs (“egg getters” and “kamikaze sperm”):

one clue comes from the size of men’s testicles. Large testes typically evolve as a consequence of intense sperm competition, that is, when the sperm from two or more males occupy the reproductive tract of one female at the same time because she has copulated with two or more males (Short, 1979; Smith, 1984). Sperm competition exerts a selection pressure on males to produce large ejaculates containing numerous sperm. In the race to the valuable egg, the larger, sperm-laden ejaculate has an advantage in displacing the ejaculate of other men inside the woman’s reproductive tract.<sup>25</sup>

... The number of sperm inseminated increases when other men’s sperm might be inside the wife’s reproductive tract at the same time as a consequence of the opportunity provided for extramarital sex by the couple’s separation. This increase in sperm insemination is precisely what is expected if humans had an ancestral history of casual sex and marital infidelity.

... [C]oil-tailed kamikaze sperm have another function besides getting to the egg: In fact, they seem to be designed to block competing male sperm from doing so.

In one study men were found to inseminate a larger fraction of these coil-tailed blockers into the female when there was an increased chance that she might have sex with another man (Baker & Bellis, 1995, p. 267). Furthermore, after the insemination of a large dose of coil-tailed blockers, women apparently retained fewer sperm from subsequent inseminations.<sup>26</sup>

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<sup>25</sup>The relation between the number of sperm present in semen and mating competition is borne out in comparisons among primates. Buss writes, “To get a concrete feel for the differences in sexuality between chimps and humans, Wrangham (1993) summarized data from a variety of studies on the estimated number of male copulation partners that females from a variety of primate species experienced per birth. The highly monogamous gorilla females averaged only one male sex partner per birth. Human females were estimated to have 1.1 male sex partners per birth, or nearly 10 percent more sex partners than gorillas. In contrast, baboon females had eight male sex partners per birth; bonobo chimp females had nine male sex partners per birth; and common chimpanzee females (*Pan troglodytes*) had thirteen male sex partners per birth. Thus, the behavior that leads to sperm competition—females having sex with a variety of males—appears to accord well with the evidence on sperm volume. Humans show higher levels of sperm competition than the monogamous gorillas but far lower levels of sperm competition than the more promiscuous chimps and bonobos” (ibid 166).

<sup>26</sup>ibid 166-167.

These physiological factors give support to the observed phenomena of male promiscuity but go further – giving indication concerning what may be moving males and which males will be so moved.

There is also psychological and behavioral evidence that males are inclined to be promiscuous. According to Buss, data bear this out:

... [E]mpirical evidence has shown that men have a greater desire for short-term mating than do women; men express a greater desire for a variety of sexual partners, less time elapse before seeking sexual intercourse, lower their standards dramatically when pursuing short-term mating,<sup>27</sup> have more sexual fantasies and more fantasies involving a variety of sex partners, have a larger number of extramarital affairs,<sup>28</sup> and visit prostitutes more often.<sup>29</sup>

While men appear to engage in problematic strategies for marriage, reasonableness reveals that women must also engage in these activities: “The biological irony of the double standard is that males could not have been selected for promiscuity if historically females had always denied them opportunity for expression of the trait.”<sup>30</sup> Buss writes, “Mathematically, the number of short-term matings must be identical, on average, for men and women.

Every time a man has a casual sexual encounter with a woman he has never met, the woman is simultaneously having a casual sexual encounter with a man she has never met.”<sup>31</sup> He explains:

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<sup>27</sup>Buss writes, “Compared with their long-term preferences, for casual sex partners men dislike women who are prudish, conservative, or have low sex drives. Also in contrast to their long-term preferences, men value sexual experience in a potential temporary sex partner, which reflects a belief that sexually experienced women are more sexually accessible to them than women who are sexually inexperienced. Men abhor promiscuity or indiscriminate sexuality in a potential wife but believe that promiscuity is either neutral or even mildly desirable in a potential sex partner. Promiscuity, high sex drive, and sexual experience in a woman probably signal an increased likelihood that a man can gain sexual access for the short term. Prudishness and low sex drive, in contrast, signal difficulty in gaining sexual access and thus interfere with men’s short-term sexual strategy” (ibid 170-171).

<sup>28</sup>“Despite ... varying estimates and a possible narrowing of the gap between the sexes, all studies show sex differences in the incidence and frequency of affairs, with more men having affairs more often and with more partners than women” (ibid 173).

<sup>29</sup>ibid 185.

<sup>30</sup>Robert Smith (cited in ibid 161).

<sup>31</sup>ibid 175.

Mathematically, ... short-term mating requires two. Except for forced copulation, men's desire for short-term sex could not have evolved without the presence of some willing women.

Evidence indicates that some women historically have engaged in short-term mating some of the time.<sup>32</sup> The existence of physiological clues in men, such as testicle size, different sperm morphs, and variations in sperm insemination, suggest a long evolutionary history of *sperm competition* – where the sperm from two different men have inhabited a woman's reproductive tract at the same time. From an evolutionary perspective, it is unlikely that women would have recurrently engaged in short-term mating without reaping some adaptive benefits.<sup>33</sup>

Due to the greater investment in offspring that women must expend, women tend, in long-term mating strategies, to seek men capable of high investment (see above). This desire for dependable, generous, resource-ful males is also evidenced in female short-term mating strategies. Buss writes that there are “potentially, five classes of [short-term] adaptive benefits to women [in infidelity]: economic or material resources, genetic benefits, mate switching benefits, mate skill acquisition benefits, and mate manipulation benefits.

Empirical evidence [, however] supports the importance of mate switching and resource acquisition, and does not at all support status enhancement or mate manipulation benefits.”<sup>34</sup>

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<sup>32</sup>Buss points up women's orgasm patterns as key evidence that women have engaged in short-term mating strategies throughout evolutionary history. “Women discharge roughly 35 percent of sperm within thirty minutes of the time of insemination, averaged across all instances of intercourse. If the woman has an orgasm, however, she retains 70 percent of the sperm, ejecting only 30 percent. This 5 percent difference is not large, but if it occurred evolutionary time. Lack of an orgasm leads to the ejection of more sperm. This evidence is consistent with the theory that a woman's orgasm functions to draw the sperm from the vagina into the cervical canal and uterus, increasing the probability of conception:

The number of sperm a woman retains is also linked with whether she is having an affair. Women time their adulterous liaisons in a way that is reproductively detrimental to their husbands. In a nationwide sex survey of 3679 women in Britain, all women recorded their menstrual cycles as well as the timing of their copulations with their husbands and, if they were having affairs, with their lovers. It turned out that women having affairs appeared to time their copulations, most likely unconsciously, to coincide with the point in their menstrual cycle when they were most likely to be ovulating and hence were most likely to conceive (Baker & Bellis, 1995) ... (ibid 176).

<sup>33</sup>ibid 185.

<sup>34</sup>ibid.

Furthermore, there are now empirical data on female adaptive benefits from short-term mating. Buss points up that the expected benefit – “sexual gratification” – is reportedly less important than “context” regarding women’s strategies.<sup>35</sup> Greiling and Buss found that, rather than sexual pleasure, women reported that extra-marital affairs eased leaving current partners or finding a “more desirable” partner.

In another study, they found that women were open to affairs when they discovered that their partners were having affairs, when their partners were sexually unwilling, or when in abusive relationships with their partners – the very factors that lead to break-ups, divorce, and attendant annulment issues.<sup>36</sup> Conversely, their choices for partners in the affairs tended to be men who offered greater attention, time, or resources; the outcome is often serial monogamy and stepfamilies. The conclusion is that women’s short-term mating strategies are in service of their long-term strategies, that is, procuring a new mate for long-term pair bonding and child rearing.<sup>37</sup>

In conjunction with problems associated with short-term mating strategies come the conflicts that arise from different mating goals of partners. Many of the “incompatibility” problems and “irreconcilable differences” that couples experience often arise from the divergent mating strategies among spouses. Buss theorizes that the reason for conflict between the sexes is competition and interference regarding the respective goals of each. He explains the conflicts in terms of “strategic interference theory,”<sup>38</sup> that is, in light of experienced interference – from a partner – to enacting one’s mating strategy:

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<sup>35</sup>Buss notes that “a surplus of women tends to promote short-term mating in both sexes” (ibid 186).

<sup>36</sup>Unfortunately, these breakups may not lead to the intended betterment of women and offspring but may, in fact, lead to the impoverishment of women and children (see Fred Moody, “Divorce: Sometimes a Bad Notion” [abridged], *Utne Reader*, No. 42 (Nov./Dec. 1990): 70-78 {while dated, the article gives a sobering appraisal of the affects of divorce on women and children}; see below on Robert Axelrod and “tit-for-tat” strategies).

<sup>37</sup>See *Evolutionary Psychology* 180-181.

<sup>38</sup>Buss writes, “*Strategic interference* may be defined as when a person employs a particular strategy to achieve a goal and another person blocks or prevents the successful enactment of that strategy or the fulfillment of the desire. ... In sum, men and women come into conflict not because they are competing for the same resources, as occurs in same-sex strategic interference, but rather because the strategy of one sex can interfere with the strategy of the other” (ibid 314).

The theory of strategic interference applies not just to conflicts about the timing of sexual intercourse. Conflict can pervade all relations between the sexes, from contact in the workplace and on the dating scene to skirmishes that occur over the course of a marriage. ... A man who deceives a woman about his marital status and a woman who deceives a man about her age both violate the desires of the opposite sex and so represent forms of strategic interference. Within a marriage, sexual infidelity represents another form of strategic interference because it violates the desires of the spouse.

Coercive control, threats, violence, insults, and attempts to lower a partner's self-esteem constitute other forms of strategic interference in long-term relationships. The key point is that strategic interference – blocking the strategies and violating the desires of someone else – is predicted to pervade interactions between the sexes, from strangers to intimate partners.<sup>39</sup>

Here, Buss presents examples of strategic interference, noting that one can predict – in light of our natural proclivities to maximize survival of our own genetic material – that we will utilize our ability to frustrate partners' similar drive to pass on genes successfully.

Further, Buss notes the conflict attendant upon competing long-term strategies (usually of women) and short-term strategies (usually of men) between (potential) mates:

Conflict between men and women pervades social living, from disagreements on dates to emotional distress within marriages. Evolutionary psychology provides several key insights into why such conflicts occur and the particular forms they take. The first insight comes from strategic interference theory, which holds that conflict results from a person blocking or impeding the successful enactment of a strategy designed to reach a particular goal. If a woman happens to be pursuing a strategy of long-term mating and a man a strategy of short-term mating, they will interfere with the successful attainment of the goal of each other's strategies. Negative emotions such as anger, distress, and jealousy are hypothesized to be evolved solutions that alert individuals to strategic interference.<sup>40</sup>

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<sup>39</sup>ibid 313.

<sup>40</sup>ibid 342; see also 313-314.

The conflicts that ensue from short-term mating strategies and strategic interference can be best explained in contrast to the long-term strategies and desires of one's mate.

When evolutionary mechanisms are recognized, it becomes clear that – at the vital level – both quasi-fidelity (for the benefit of children) and sexual prodigiousness (for the propagation and perceived optimization of offspring) are evolutionary strategies for both males and females.

Furthermore, evolutionary science makes evident that quasi-pair bonding is an evolutionary strategy for the rearing of young to independent viability.<sup>41</sup>

The strongest evolutionary reason for both sexes to hold to long-term commitment is the siring and raising of offspring. According to one foundational theory in evolutionary psychology – “Inclusive Fitness Theory”<sup>42</sup> – when males and females produce children together, both partners have invested fifty-percent of their genes in each offspring.<sup>43</sup> In consequence, they have the tendency to promote the welfare of those who carry their genes. Thus, insight into evolutionary fitness supports the common-sense wisdom that procreating – creating “a bond of union” – will hold marriages together.<sup>44</sup>

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<sup>41</sup>See Andrew M. Greeley, “Marriage,” in *The Bottom Line Catechism for Contemporary Catholics*, (Chicago: The Thomas More Press, 1982), 115-117.

<sup>42</sup>See *Evolutionary Psychology* 12-14.

<sup>43</sup>Tim Clutton-Brock's position, in “Breeding Together: Kin Selection and Mutualism in Cooperative Vertebrates,” is, “Recent studies also suggest that the indirect benefits of cooperative behavior may often have been overestimated while the direct benefits of helping to the helper's own fitness have probably been underestimated. It not seems likely that the evolutionary mechanisms maintaining cooperative breeding are diverse and that, in some species, the direct benefits of helping may be sufficient to maintain cooperative societies. The benefits of cooperation in vertebrate societies may consequently show parallels with those in human societies, where cooperation between unrelated individuals is frequent and social institutions are often maintained by generalized reciprocity” (*Science*, Vol. 296, April 5, 2002, 69).

<sup>44</sup>The converse, not siring children, regardless of whether this is due to impotence or unwillingness, is predicted to be a cause of infidelity and break-up. Producing genetically unhealthy children — such as those with blindness, deafness — or even a child with “perceived” limitations is also predicted to be an incentive to pursue short-term mating strategies that often lead to divorce.

Robert Axelrod – who proposed “tit-for-tat”<sup>45</sup> as key to establishing cooperation<sup>46</sup> – asserts that one of the most successful strategies to promote and maintain a “cooperative alliance”<sup>47</sup> within marriage is to “*enlarge the shadow of the future.*” Axelrod explains why this strategy is effective:

If the other individual thinks that you will interact frequently in the extended future, he or she has a greater incentive to cooperate. If people know when the “last move” will occur and that the relationship will end soon, there is a greater incentive to defect and not cooperate. Enlarging the shadow of the future can be accomplished by making interactions more frequent and by making a commitment to the relationship, which occurs, for example, with wedding vows. Perhaps one reason that divorces are so often ugly, marred by unkind acts of mutual defection, is that both parties perceive the “last move” and a sharply truncated shadow of the future.<sup>48</sup>

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<sup>45</sup>Axelrod developed this theory to solve the prisoner’s dilemma: “The prisoner’s dilemma is a hypothetical situation in which two people have been thrown in prison for a crime they are accused of committing together and of which they are indeed guilty.” The winning strategy in “iterated prisoner’s dilemma” games is called *tit for tat*. Axelrod and Hamilton discovered this strategy by conducting a computer tournament. Economists, mathematicians, scientists, and computer wizards from around the world were asked to submit ‘strategies’ for playing two hundred rounds of the prisoner’s dilemma. Points were rewarded in accordance with the payoff matrix.... The winner was whoever had the highest number of points. The ‘strategies’ consisted of decision rules for interacting with other players. A total of fourteen strategies were submitted and were randomly paired in competition in a round-robin computer tournament. Some strategies were highly complex, involving contingent rules for modeling the other’s strategy and suddenly switching strategies midstream. The most complex had seventy-seven lines of statements in the computer language FORTRAN. The ‘winner’ of the tournament, however, employed the simplest strategy of all, tit for tat, containing a mere four lines of FORTRAN statements. It had two simple rules: (1) cooperate on the first move and (2) reciprocate on every move thereafter. In other words, start by cooperating, and continue cooperating if the other is also cooperating. If the other defects, however, then defect in kind. Trivers (1985) aptly labeled this ‘contingent reciprocity’” (*Evolutionary Psychology* 256).

<sup>46</sup>“Axelrod (1984) identified three features of this [the tit-for-tat] strategy that represented the keys to its success: (1) never be the first to defect—always start out by cooperating, and continue to cooperate as long as the other player does so; (2) retaliate only after the other has defected—defect immediately after the first instance of nonreciprocation; and (3) be forgiving—if a previously defecting player starts to cooperate, then reciprocate the cooperation and get on a mutually beneficial cycle. To summarize: ‘First, do unto others as you wish them to do unto you, but then do unto them as they have just done to you’” (cited in *ibid*, 257).

<sup>47</sup>In *Evolutionary Psychology* 267, Buss writes that “in a marriage, which can be considered another type of cooperative relationship, an immediate reciprocal exchange orientation is typically linked with marital dissatisfaction and the expectation that the marriage might dissolve” (see Hatfield & Rapson, 1993; Shackelford & Buss, 1996).

<sup>48</sup>*Evolutionary Psychology* 258.

Thus, in light of human mental architecture, adaptive cooperation as well as commitment – on the level of (religious) values – indicate and reinforce the view that a relationship *can* be lasting, even lifelong.

Further, while the problems for lasting pair bonds – attendant upon the vital drives and adaptive strategies that flow from our evolved mental architecture – are daunting and will endure, one ought not think that we are condemned to lives controlled by the “gene’s-eye view” or vital proclivities, for the discoveries of evolutionary psychology concerning human tendencies are simply that, *tendencies*. These tendencies – for short-term mating strategies, strategic interference, and partner trading – are not inevitabilities. Throughout history, cultures and, especially, religious cultures have trained people to live responsibly, making commitments and taking them seriously. Our large brains enable us to consider our actions, evaluate our options, and come to decisions that can go beyond any proclivities that are innate through evolution. Marriage need not be an institution doomed to failure.

What, though, is the nature of marriage? In the next section, we will draw out the implication for understanding marriage that follows from the insights of the evolutionary sciences.

## **2. What is Marriage?**

In light of contemporary understanding of our evolved structures and tendencies, one can see that marriage in its multifarious manifestations is a cultural creation. Its purpose is the orderly and peaceful pairing of partners and the rearing of offspring. With marriage, pair bonding rises above the instinctual and evolutionary to the cultural level and the realm of cultural values. The cultural level structures, directs, and delimits the natural, vital tendencies; cultures support the vital level and, sometimes, go beyond the natural when (ethical and) religious sensibilities and ideals are incorporated (on which see below, “Marriage in Light of Religious Values”). Marriage is a human institution that elevates the biological drive to procreate and nurture children to the value of long-term relationship between partners in fidelity and dedication to each other and their child(ren). Almost twenty-five hundred years ago, Aristotle expressed this common-sense understanding of marriage:

Between man and wife friendship seems to exist by nature; for man is naturally inclined to form couples – even more than to form cities, inasmuch as the household is earlier and more necessary than the city, and reproduction is more common to man with the animals. With the other animals the union extends only to this point, but human beings live together not only for the sake of reproduction but also for the various purposes of life; for from the start the functions are divided, and those of man and woman are different; so they help each other by throwing their peculiar gifts into the common stock. It is for these reasons that both utility and pleasure seem to be found in this kind of friendship. But this friendship may be based also on virtue, if the parties are good; for each has its own virtue and they will delight in the fact. And children seem to be a bond of union (which is the reason why childless people part more easily); for children are a good common to both and what is common holds them together.<sup>49</sup>

Aristotle asserted that human beings have a “natural inclination” to couple. He further held that humans come together for more than biological procreation, bringing their various “gifts” into a common store. Offspring bind the couple in mutual care for their common progeny. Moreover, virtue can lead the couple beyond pleasure and useful cooperation to the delights of higher friendship.

On the cultural level, marriage is a communally-sanctioned bond between sexual partners for the stability of families. Thus, marriage is a support and sublation<sup>50</sup> of our vital level drive to reproduce in quasi-pair bonds. Like other cultural institutions, marriage is in support of vital level drives. Moreover, like other cultural structures, the meaning and understanding of marriage includes aspects that have provenance in higher-level values. For example, the ideals of life-long marriage and permanent sexual fidelity come from ethical and religious insights. On the personal level, marriage is the deliberate affirmation of these cultural values.

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<sup>49</sup>Aristotle, *Nicomachean Ethics* Bk. 10, Ch. 12.

<sup>50</sup>By “sublation” (*Aufhebung* in Hegel), we mean that the higher level, while transcending the lower, does not deny the values of the lower, nor does it interfere with, much less undo the functions of the lower (see Bernard J. F. Lonergan, *Insight: A Study of Human Understanding*, ed. Frederick E. Crowe and Robert M. Doran [Toronto: University of Toronto Press, 1992], 446-447).

Beyond the cultural ideals of stable marital and family relationships, religious insight concerning the human good has led people and traditions to hold that marriage represents the fundamental truth that we become more human and grow toward our potential for self-transcendence as rational creatures, and not *merely* biological and social creatures, through life-long commitment to a spouse and children (*viz.*, Gen 2:18: “It is not good for the man to be alone”).

These vital, social, personal and religious, value-driven human goals – present in marriage – take shape in diverse forms across cultures. Regarding the vital level, marriage seems structured to curb the male tendency to indiscriminate mating strategies and support the need for supportive male relationships with females and children. Thus, there are usually sanctions against adultery and abandonment. At the social level, marriage becomes the core of social relationships<sup>51</sup> (*viz.*, the common teaching that the family is society in miniature<sup>52</sup>). In this regard, societies, to a greater or lesser degree, take pains to support marriages. Communities celebrate marriage rituals and couples are often presented with gifts to help them start their marriage. Moreover, contracts are signed; laws are enacted and enforced to protect the rights of partners and their children (*viz.*, “community property” and “deadbeat dad” laws). At the level of personal and religious values, life-long marriage is viewed as an ideal both within and outside religious communities.<sup>53</sup> Some religious traditions have come to regard marriage as a “covenant” as well as a contract, analogous to God’s covenant relationship with Israel.<sup>54</sup> Within Euro-centered cultures, secular marriage rituals include an affirmation of “till death do us part.” The Jewish Scriptures include passionate statements about the forsaken “wife of [one’s] youth” (see Isa 54:6; Prov 5:8). Christian ceremonies assert that “what God has joined,” no one ought divide (see Mt. 19:6). Muslim tradition teaches that divorce is *the* most repugnant of the allowances God has made in light of human hard-heartedness.<sup>55</sup>

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<sup>51</sup>In evolutionary-biological terms, the primary social unit is a woman and her child(ren).

<sup>52</sup>This is as true of Confucianism and Islam as of Euro-centered culture.

<sup>53</sup>The Bible presents marriage as God-ordained (see Gen 2). In the Qur’an, there is an affirmation of this tradition and, further, many revelations of how God intends marriage to be lived (see Qur’an, S. 4).

<sup>54</sup>See e.g., The Pastoral Constitution of Vatican II, *Gaudium et Spes* (“The Church in the Modern World”), par. 48.

<sup>55</sup>See Abu Dawud, *Sunan* (Kanpur, India: MatbaMajidi, 1346 AH), I: 94.

### 3. Is Marriage Natural?

Most cultures have developed marriage institutions and placed sanctions on adultery and promiscuousness (except sometimes in the case of prostitution<sup>56</sup>). The Abrahamic Traditions hold that marriage was instituted at creation, that is, that marriage is the natural state for mating and ordained as such by God. Luther denied sacramental status to Matrimony on the principle that it was ordained by God at creation and not instituted by Jesus. There is, thus, general agreement that marriage is natural to humans. The lamentations concerning the state of marriage in our culture, referred to in the introduction above, are ample cues to the seemingly “self-evident” naturalness of marriage.

However, when we take evolutionary biology and our evolved mental structures seriously, a distinction must be recognized that makes the assumption of the “natural” state of marriage problematical. While evolutionary mating strategies make quasi-pair bonding natural to us, indissoluble, life-long unions are not; marriage as permanent pairing is not natural to us. It is the creation of people, societies. The fact of differing understandings of marriage within diverse cultures and the allowance of divorce within even the Abrahamic Traditions might have led to this insight but, instead, introduced not denial of matrimonial naturalness but suspicion and rejection of others’ ways of marriage. When, however, one recognizes the relation of marriage to human evolutionary development, one can no longer hold to the naturalness of (life-long) marriage. One cannot, in light of current scientific knowledge, assert that life-long marriage is instinctual to us. However, one can see that marriage can become a connatural sublation of the vital level. Further, one may affirm, as do the Abrahamic Traditions, that God has revealed that marriage is God’s will for us. Such an avowal is an insight into God’s desires for us on the level of values, not a statement of the biological necessity or, even, tendency.

### 4. Is Marriage Defensible?

Do the evolutionary sciences lead one inexorably to reject marriage as an unnatural social and religious creation? We would say, no.

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<sup>56</sup>Augustine and Aquinas held that prostitution, while gravely sinful, ought not be punished by civil government in as much as government is to control dangers to the good of society, not private morality (see Vincent M. Dever, “Aquinas on the Practice of Prostitution,” *Essays in Medieval Studies* 13 (<http://www.illinoismedieval.org/ems/VOL13/13ch4.html>), accessed, 02/10/2012).

Such a conclusion would affirm the principle that neither society nor religious tradition should call us beyond our evolutionary tendencies. Evolution has equipped us with reasoning power to calculate probable outcomes and devise strategies for problem solving. Social and value-centered structures, born of our ability to reason and value (non-adaptive byproducts<sup>57</sup> of our information-processing minds), are human creations often viewed as divinely inspired or mandated, and include insights that go beyond survival and gene transference. Further, they are attempts to move us to the objective good as understood within community.

Marriage is an example of “value building upon nature.” That is, by analogy to the traditional Christian understanding of grace, marriage is not a contradiction to human tendencies but, rather, an institution built upon the foundation of evolutionary drive. The biological, evolutionary impetus to mate, produce, and nurture progeny is supported and extended beyond the bounds that evolution has prepared. The same mental architecture that allows us to evaluate the fitness of prospective mates and the consequences of infidelity and trading mates enables us – as byproduct – to form and recognize the high-level values of fidelity, dedication, self-sacrifice.<sup>58</sup> Marriage, in its social and religious dimensions, sublates the natural human instinct for survival through propagating one’s genes. Marriage does not deny the natural tendencies; rather it raises them to the realm of social good and transcendent value.

In the following table, we illustrate the analogous aspects among the vital, cultural, ethical, religious and sacramental forms of human pair bonding. We demonstrate that each higher level sublates those below it, that is, that the higher go beyond the lower without denying the workings and values intrinsic to those lower:

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<sup>57</sup>See Steven Pinker, *How the Mind Works* 525. David M. Buss explains nonadaptive by-products as “[c]haracteristics that do not solve adaptive problems and do not have functional design; they are ‘carried along’ with characteristics that do have functional design because they happen to be coupled with those adaptations” (*Evolutionary Psychology* 37). Further, Buss writes, “The hypothesis that something is a by-product of an adaptation requires identifying the adaptation of which it is a byproduct and the reason why its existence is associated with that adaptation” (ibid 38).

<sup>59</sup>For a detailed analysis of the relationships between evolved mental architecture and levels of values, see Rosemary J. Bertocci and Francis H. Rohlf, “A Lonerganian *Kritik* of the Evolutionary Sciences and Religious Consciousness: The Isomorphism of Structures, Activities, and Analysis,” *Method: Journal of Lonergan Studies* 20:1, Spring 2002, 1-19.

## Levels of Marriage

Levels	Vital/Natural Level	Cultural Level	Deliberative/ Personal Level	Authentic Religious &/ or Sacramental Level
<i>Form</i>	Quasi-pair Bond: Serial Monogamy	Marriage Contract: Monogamy, Polygamy, Polyandry, Serial Monogamy	Contractual Marriage: based on social & individual goods	Marriage Covenant: indissoluble & faithful as the ideal
<i>Primary End(s)</i>	Vital & Social: Reproduction & Care of Offspring to viability.	Vital & Social: Marriage is a legally sanctioned set of contractual stipulations, including safeguarding the economic needs & social status of partners & children.	Vital, Social, Personal & Interrelational: Marriage is for the mutual benefit of the partners & the rearing & education of children.	Vital, Social, Personal, Interrelational, Spiritual, &/or Sacramental: 1) Marriage is the fullest expression of sexual love <sup>59</sup> or 2) Marriage as an effective symbol of the love of Christ for the Church.
<i>Reasons for Marriage</i>	Vital Drives for reproduction, sexual attraction ("being in love"), stability of parental relationship for rearing children (evolved pattern seemingly for about 4 years).	Stable Relationship for couple & rearing of offspring; safeguarding economic means: guaranteeing economic rights of spouses & offspring.	Being in love, Fulfillment of the partner's happiness, Self-fulfillment, Offspring & responsible parenting.	Vocation to fulfillment through sexual love of one's partner, rearing & education of children. At the Sacramental Level, marriage is for God's glory by witnessing to God's love through sexual love, Christ's love for the Church.
<i>Partner Determination</i>	Mechanistic & Pre-reflective based on being in love: 1) Women select mates for their a) interest in & ability to <i>invest</i> resources (social status, age [slightly older], ambitiousness [financial attainments or prospects]), stability, strength, athleticism, bravery, signals of love & willingness to commit, being "good with children" (dependable, emotionally stable, kind, & positively responding to children) & b) compatibility: similar values & personality; 2) men select physically attractive women (youthful, healthy, animated) who give signs of <i>sexual fidelity</i> .	Either Mechanistic & Pre-reflective or Common Sense (Making a "good match"): 1) If mechanistic, determination is based on the same characteristics as the Vital Level; 2) if <i>arranged</i> , based on social status, property conservation, family and social compatibility.	Personal, Deliberative, & Existential: based in the couple's values.	Judgment & Discernment based on self-transcendence & authentic religious appropriation: Self-transcendence to God & others through a faithful, indissoluble covenant bond with another.
<i>Stability</i>	Adaptive: the quasi-pair bond lasts as long as the couple is in love, with the man providing resources, the woman reproductively attractive.	Cultural: the marriage lasts as long as the contractual obligations are in force (Infidelity can be overlooked in men if their resources remain in force for the family).	Personal: based in the authenticity & responsible actions of the partners.	Authentically Religious: The relationship remains despite difficulties & sin because of dedication, the belief in the binding nature of the covenant, mercy (cf. 1 Cor. 13), stability for children, & trust in God's grace.
<i>Supports/ Sanctions</i>	Social (including familial) & mutual vital interests	Legal & Social sanctions: marriage laws, divorce laws, paternal & maternal duties specified	Ethical & Personal authenticity coupled with cultural norms	Sublation of lower levels in cooperation with divine grace

<sup>59</sup>See John C. Dwyer, *Human Sexuality: A Christian View* (Kansas City, MO: Sheed & Ward, 1987).

The table demonstrates that the values of the vital, cultural, and deliberative levels are taken up in and transformed by the authentic religious level. That is, the drive to reproduce in quasi-pair bonds of the vital level, the social structures of the cultural level (purified by deliberative judgment and authentic religious reflection), and the ethical obligations and insights derived from the deliberative level are affirmed and valued at the authentic religious level.

## 5. Marriage in Light of Religious Values

Authentic religious insight leads to the recognition of the high vocation of marriage within the divine scheme for humanity and a transformed understanding of marriage and of marital spirituality informed by grace and revelation. While the authentic values of the vital, cultural, and ethical levels are affirmed, the originality of each marriage and a spirituality specific to marriage can be discerned.

Each marriage is unique. While acknowledging that marriage is God's intention for working out our vital drives and, further, that cultural forms of marriage inculcate ethical obligations and religious insights, one can see, however, that the form of marriage given in cultural and religious institutions does not indicate *how* couples are to work out their marriages in the concrete. Each individual and, therefore, each couple is unique and uniquely graced by God. Thus, each couple must discover in their actual lives the manner in which they should and will embody co-creative fecundity (see Gen 1:27-28) and the insights that humans embrace self-transcendence in relationship (see Gen 2:18, 24) and that married people are to be a sacrament of divine, passionate love for people (see Hos 2)<sup>60</sup> and Christ's love for the church (see Eph 5). While cultural, ethical, and religious traditions give the parameters within which marriages are to be lived, each couple must build their own pattern of marriage through dedication, effort, and openness to God's grace. While those who have developed good marriages can be examples for others, each marriage is to be an unrepeatable and original realization of mutuality and generosity, going beyond inclusive fitness to an inclusivity that brings God's grace to others.

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<sup>60</sup>For a moving challenge to enhance passion and sexuality within Christian marriage as sacrament of God's passionate love for people, see "Marriage," in Andrew Greeley, *The Bottom Line Catechism* (Chicago, IL: Thomas More Press, 1982).

Further, the spirituality of married people should find its center *in* the marriage. The sacramental insight that it is in the complementary love of spouses that Christ's love for the church is symbolized and that concerning the uniqueness of each marriage (stated above) suggests that the concrete acts within a marriage constitute an integral spirituality of married people. Just as marriage is to be the *mysterion* of Christ's love for the church, their actual lives are to be signs of God's love and call to the married people themselves. The sacrament of Matrimony is effected and is effectual as truly in changing diapers as in speaking vows; the sign of Christ's love is as real in nurturing one's spouse as in intercourse. That is, every act of marital love is to be an effective symbol not only for others but to the spouses themselves. Thus, the spirituality of married people should be centered in the reality of the sacrament they are called to become and be. In the words of a wise man, "If your life differs from your spiritual life, you *have* no spiritual life."

## 6. Conclusion

The evolutionary sciences do not demand a rejection of marriage in either its social or religious dimensions.<sup>61</sup> Rather, they can help us understand better the obstacles to lasting and healthy marriages.<sup>62</sup> They can assist us in discerning the different needs and tendencies of men and women that make marriage difficult.<sup>63</sup>

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<sup>61</sup>In fact, evolutionary sciences support such possibilities. As Tooby&Cosmides write, "The human psychological system is immensely flexible as to outcome: Everything that every individual has ever done in all of human history and prehistory establishes the minimum boundary of the possible. The maximum, if any, is completely unknown. Given the fact that we are almost entirely ignorant of the computational specifics of the hundreds or thousands of mechanisms that comprise the human mind, it is far beyond the present competence of anyone living to say what are and are not achievable outcomes for human beings" (*The Adapted Mind* 40).

<sup>62</sup>Buss writes, "Where women benefit from marriage and where competition for husbands is fierce, women compete with one another to signal chastity, causing the average amount of premarital sex to go down. Where women control their economic fate, do not require so much of men's investment, and hence need to compete less, they are freer to disregard men's preferences, which causes the average amount of premarital sex to go up. Men everywhere might value chastity if they could get it, but in some cultures they cannot demand it of their brides" (*Evolutionary Psychology* 151).

<sup>63</sup>Steven Pinker writes, "Many assignments of a relational model to a set of social roles feel natural to people in all societies and may be rooted in our biology. They include the Communal Sharing among family members, an Authority Ranking within the family that makes people respect their elders, and the exchange of bulk commodities and routine favors under Equality Matching. But other kinds of assignment of a relational model to a resource and a set of social roles can differ radically across time and culture. In traditional Western marriages, for example, the husband wielded Authority over the wife. The model was mostly overturned in the 1970s and some couples influenced by feminism switched to Equality Matching, splitting housework and child-rearing down the middle and strictly auditing the hours devoted to them. Since the businesslike psychology of Equality Matching clashes with the intimacy that most couples crave, most modern marriages have settled on Communal Sharing

They can enable us to recognize the danger signs and deficiencies present within marriages. More still, the discoveries of evolutionary scientists can strengthen the conviction that stable and happy marriages demand virtue of (prospective) partners. If the evolutionary sciences can teach us anything, they ought to bring us to a renewed concern for discipline, commitment, and dedication in our connubial relationships.

<sup>64</sup>Knowledge from the evolutionary sciences coupled with authentic religious appropriation provides both insight into and impetus for grace to build upon nature.

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– with the consequence that many wives feel that the couple’s failure to keep tabs on contributions to household duties leaves them overworked and underappreciated. The spouses may also carve out Rational-Legal exceptions, such as a prenuptial agreement, or the stipulation in their wills of separate inheritances for the children of their previous marriages” (*The Better Angels of Our Nature: Why Violence Has Declined* [New York: Viking Adult, 2011], 631-632; See A. P. Fiske, *Structures of Social Life: The Four Elementary Forms of Human Relations* [New York: Free Press, 1993]).

<sup>64</sup>Buss writes, “The best predictor of extramarital sex is premarital sexual permissiveness—people who have many sexual partners before marriage are more likely to be unfaithful than those who have few sexual partners before marriage” (*Evolutionary Psychology* 152).