The Oedipus Effect
Transcript

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Sophocles’ great tragedy _Oedipus Rex_ tells the story of a man who, according to the Oracle, is fated to kill his father and marry his mother. Horrified by this prospect he moves far away from home, has a “road rage” confrontation with a stranger and kills him (later to find out it was his father) and goes on to marry a woman who turns out to be his biological mother. He had not realised that the parents from whom he tried to distance himself were actually foster parents.

Many other writers have seen profound significance in this story. In 1851, Wagner wrote that “today we need only expound faithfully on the myth of Oedipus and we in it win an intelligible picture of the whole history of mankind”. Uncontainable incestuous desires appeared as a theme in several of his operas. A century later, Sigmund Freud made the _Oedipus complex_ the centrepiece of his psychoanalytic theory. Little boys, he concluded, went through a phase of desiring intercourse with their mother and fearing castration by their jealous father. Little girls were thought to desire their father, envying his penis and feeling hostile toward their mother (the _Electra complex_). Homosexuality (called “inversion”) was said to be caused by a “failure to resolve the Oedipus complex”.

Freud became progressively grandiose in his views about the importance of his Oedipus theory. In _Totem and Taboo_ (1918), he wrote that “the beginnings of religion, morals, society and art converge in the Oedipus complex” (Schevy, 2013). Anthropologists like Bronislaw Malinowski and Melford Spiro debated whether it was a universal principle of human nature or one that appeared only in European cultures with our “triangular” family structure (Spiro, 1982). Psychoanalytic interpretations began to pervade the arts (e.g., the Laurence Olivier production of _Hamlet_ in 1937, in which his mother was played by an unusually young and sexy Eileen Herlie, actually 13 years his junior).

Many of Freud’s notions sound preposterous today and have been largely abandoned outside of strictly psychoanalytic circles. They are unscientific in that they are usually too vague to refute, especially since they are supposed to operate unconsciously and contrary data can be explained in terms of “defence mechanisms” such as “reaction formation” (Eysenck & Wilson, 1973). The Freudian theory of homosexuality is contradicted by evidence for its constitutional origin (Wilson & Rahman, 2005). Nevertheless, there remains an element of truth in the idea of the Oedipus complex.

When individuals who were separated from their families as young children remeet their biological relatives in adulthood they often experience powerful incestuous desires for them (Greenberg & Littlewood, 1995). This has been called _genetic sexual attraction_, although the term is misleading because the attraction stems mainly from early experiences rather than genes per se. Powerful feelings of “recognition” and almost irresistible erotic attraction are felt in around half of such reunions. There is often mention of familiar odours and resemblance to the self. Sometimes these feelings commence in anticipation of the actual meeting as a kind of “yearning” for something lost or unfilled. They seem “half in love” before meeting. Occasionally they proceed to an actual physical relationship.

There have been one or two instances where people have unwittingly married a close relative with the odds of coincidence extremely low. This could happen more frequently with “superdad” sperm donors being used for the insemination of many women within the same hospital catchment. On top of that, AIDS is widely practised on an amateur basis. One study in SE England concluded that 30% of husbands were not the biological father of “their” children (Sunday Times, 28/4/85). Since laws relating to anonymity of blood parents in cases of adoption have been eased, more and more adoptees are rediscovering long-lost relatives. It is in such cases that incestuous feelings can be most troublesome and the reason is now understood.

Taboos against incest are almost universal across cultures, often backed by laws and punishments. They are strongest with respect to parent/child relationships (which may be viewed as child abuse), usually extend to brothers and sisters but are more variable where second-degree relatives, like cousins, are concerned. The only exceptions to brother-sister marriage bans seem to have occurred amongst elite subgroups such as Ancient Egyptian royalty, where concern was with consolidating power and property within the family.

More often, “marrying out” is used as a way of building political alliances as well as mixing genes (Leavitt, 2013).

Freud believed powerful sanctions against incest were needed to combat a natural inclination towards incest. However, formal prohibitions seem to be largely unnecessary because sexual aversion arises naturally within a family because of the intimate proximity of their living arrangements. This was observed in both human and non-humans by the Finnish anthropologist Edvard Westermarck (1894). The longer the period of co-residence with a sibling the more incest is viewed as immoral and distasteful (Lieberman et al, 2003). It makes little difference whether or not those raised together are blood relatives. Studies in the Israeli kibbutzim find sexual desire and marriage absent among those sharing the same house prior to age 6 (Sheper, 1983). Incest avoidance may have evolved to protect against the coincidence of harmful recessive genes but the mechanism seems to be that of “familiarity breeds contempt”.

The _Westermarck effect_ has backup from forces other than over-familiarity. One is _spatial dispersion_ observed in many primates, with adolescent males wandering away from their birth-troupe. The well-known _teenage rebellion_ could be a similar human mechanism. Adolescents notoriously become difficult and argumentative, select music, clothing and general self-presentation (coloured hair, tattoos, piercings etc) that seem calculated to alienate the parents. Although partly an assertion of independence, this functions to keep the parents at bay in order to combat the possibility of incest. After the “hormonal” phase, when a girl especially is most vulnerable, things usually settle down again and good relations are restored.

In many non-human species the females avoid contact with close male kin at times when they are fertile. That this is true for humans is demonstrated by a study of mobile phone records (Lieberman et al, 2011). Young women were less likely to phone their father during days when they were ovulating and terminated the call more quickly if their father called them. This avoidance of contact was specific to the father (call-time with their mothers actually increased) and seems likely to be an incest avoidance mechanism. Far from avoiding non-related males, women become more seductive in dress and gestures when ovulating. For example, they are three times as likely to wear red or pink (Beall & Tracy, 2013).

In non-human animals the Westermarck effect is mainly mediated by smell. A gene complex which controls the immune system (the _major histocompatibility complex_) is detectable through smell by potential partners (Wedekind et al, 1995). Non-human animals usually prefer mating with partners whose smell suggests they are genetically dissimilar in MHC, thus increasing heterozygosity in their offspring and broadening their immune spectrum. Human females seem to be particularly smell-oriented in the mating domain (Schneider, 2000; Havlicek et al, 2008). They are attracted to men with _dissimilar_ MHCs when they are in breeding mode (mid-cycle, not on the pill, not already pregnant, and engaged in “extra-pair” mating). At other times, they tend to prefer _familial_ smells, which signal safety and family support (Havlicek & Roberts, 2009).
While outbreeding has much to recommend it, there are counterforces limiting its advantage. Inbreeding can be an adaptive strategy in some circumstances by preventing the break-up of successful gene combinations (Bateson, 1978). The concept of inclusive fitness (kin selection) implies that individuals are more helpful to those closely related to themselves and the more our genes overlap with those of our partner the more they are replicated in our offspring. Perfect outbreeders “discount their genome” by 50% with each generation (Leavitt, 2013). Friends and mating couples show genetic overlap on a great many traits, suggesting we have mechanisms for detecting our genes in others (Rushton & Bons, 2005). Probably, there is a point of optimal outbreeding beyond which preferences are based on kin recognition. At least, a variety of successful strategies are possible.

Attraction to our relatives was revealed in a study by Fraley & Marks (2010). They had 74 students rate 100 strangers for sexual attractiveness. For half of the subjects each face was preceded by a subliminal picture of a close family member. Controls were exposed to a stranger. Ratings made with their family member present indicated the faces as more attractive. Familial priming seemed to increase attraction to the stranger. A second study explored the idea that we are attracted by our own image. When faces of strangers were morphed to be more like the subjects’ own face they were judged more attractive (though this finding was reversed if subjects were made aware of the morphing).

Laeng et al (2013) had people rate the attractiveness of pictures of their romantic partner morphed in various ways. Some were blended with their own face to varying degrees (11%, 22%, 33%) while others incorporated an element of an opposite-sex prototype (an average face). Independent judges preferred the ones blended with prototypes. Subjects themselves liked best those that were an amalgam with their self-image, the optimum being the 22% blend (which signal-detection analysis showed to be the highest blend that remained unconscious).

When people judge the attractiveness of others morphed towards the image of their sibling, differences were observed between the sexes (Marcinkowska et al, 2013). Men rated the pictures as more attractive when they resembled their own sister, while women found pictures with a component of their brother to be less attractive. This supports the idea that the Westermarck Effect operates more powerfully on females because they have more to lose by inbreeding (Haag, 1999).

The effect of self-resemblance on mate choice seems to be context dependent. DeBruine (2005) reports that other-sex faces manipulated to be more like the self are rated as more “trustworthy” but not higher in sex appeal. In fact, where short-term encounters are concerned (as against long-term relationships) self-resemblance is detrimental to sexual desirability. This is consistent with the MHC evidence outlined above.

The narcissism idea has been entertained as an alternative to familial recognition as an explanation as to why we are attracted to genetically related people. However, there are reasons for thinking it cannot be sufficient. Animal studies suggest that parental imprinting is the key mechanism. imprinting refers to learning that is early in life, sudden, irreversible and occurring within a specific developmental window. The classic example is ducklings which follow the first moving object they see, even if they are the gumboots of Konrad Lorenz.

With respect to mate choice, it is not just parents we imprint on but the opposite sex parent. For example, Kendrick, et al (1998) reported that kids reared by a sheep mother and lambs reared by a goat mother grew up to fancy the “wrong” species. This appeared to be down to olfactory and visual imprinting, the effect being most noticeable with males. These cross-rearing studies confirm the parental imprinting idea and cannot be accounted for by reference to the self-image. After all, animals do not use mirrors and would not recognise their own reflection if they did.

Maternal imprinting of mate preferences is seen most clearly in birds (ten cate et al, 2006). Beak colours of zebra finches were manipulated with nail varnish along a continuum from orange though red. Male birds raised with red-beaked mothers sang more courtship songs to red-beaked potential mates in adulthood and vice versa for those raised by orange-beaked mothers. Interestingly, maximum attraction (proportion of songs) was to female birds with exaggerated beak colours (more extreme than the anchor colours of their mothers). The authors suggest that this response to signals may be a drive towards sexual dimorphism. The same probably applies to female preferences among males, hence the spectacular peacock’s tail.

Experience of the parents also shapes the adult sexual preferences of humans. Our partners tend to match our opposite-sex parent more than our same-sex parent with respect to eye colour, hair colour, age, race, and personality (Wilson & Barrett, 1987; Perrett et al, 2002; Little et al, 2003; Gyris et al, 2010). Independent judges are able to match (beyond chance) a man’s wife with his mother photographed at a similar age (Bereczkei, 2004). A similar correlation between husbands and fathers-in-law was found, both in facial metrics and ratings of photographs, by Bereczkei et al (2009). Marcinkowska & Rantala (2012) replicated the cross-sex similarities only for men’s partners and their mothers (not for women’s partners and their fathers).

Such findings support the view that humans use a template of opposite-sex parent acquired in childhood to guide the search for a partner in adulthood. However, the quality of the relationship with the opposite-sex parent moderates this process. Women who rate their childhood relationship with their father positively show a stronger match to their partner in terms of facial metrics (Wszezewska et al, 2007). The same applies for girls and their foster fathers and for boys and their mothers (Bereczkei et al, 2004). Personality shows similarities between self and opposite-sex parent and relationship satisfaction goes with degree to which people perceive similarity between their parents and partners (Geher, 2000).

It is not just our choice of a mate that is influenced by parental imprinting. Connections between sexual arousal and body parts, perfumes, fabrics, clothing and punishment rituals are also influenced by childhood experience (Epstein, 1987). Fillion & Blass (1986) treated the nipples and genitals of mother rats with citral (a lemon scent) as they suckled their pups. In adulthood male rats so reared were found to be more sexually excited by lemon-scented females than normal rats.

Rats are particularly smell-oriented, but for the human male visual stimuli (colours and shapes) are more readily imprinted in relation to sexual arousal. This accounts for common fetishes like rubber, leather, lingerie and high-heeled shoes. The frequency with which childish themes (e.g., adult babies) and discipline (sadomasochism) appear in the fantasies of human males testifies to the infantile origin of human sexual preferences (Wilson, 1987). The sexual preference for pregnant and lactating women is more common in men with younger siblings whose mother was pregnant or nursing between the ages of 1.5 and five years (Enquist et al, 2011). This provides a clue as to the sensitive period for acquiring “scripts” for sexual excitement – apparently it is within the first five years of life.

The Freudian theory of the Oedipus complex connects with some important psychological principles. However, it rather distorts them. Incest avoidance seems to be the default. Only in exceptional circumstances are social taboos and threats of punishment needed for reinforcement. There is no evidence for “castration fear” or any special antagonism of a child toward the same-sex parent during the “Oedipal” years (Daly & Wilson, 1990). Mating preferences are indeed shaped by blueprints derived from childhood experience of our parents, but that does not mean we desire them sexually. By the time the blueprint is activated in mate choice our parents no longer fit. Family dynamics are better understood within the empirical framework of evolutionary psychology than the convoluted theorising of psychoanalysts. As Ebbinghaus once said, generally speaking, “what is true in Freud is not new and what is new is not true” (Eysenck & Wilson, 1973).
References


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