Students in “Bioethics of New Technologies” were asked to write a research paper that addresses ethical issues precipitated by a new technology. In her paper, Kit takes on the ethical challenges brought about by anti-love biotechnology, i.e. chemical interventions in the brain that are intended to interfere with lust, attachment, or attraction that are somehow deemed undesirable. By presenting five objections to the “bioliberal” position—i.e., the view that such interventions are mostly permissible—Kit builds a strong argument for her “bioconservative” stance. In particular, she includes reasons ranging from physiological side-effects on the individual, to possible collateral harms inflicted upon families and friends, as well as the progress of tolerance in the face of sexual diversity. She then deftly points out the problems with a particular opponent’s view and adeptly warns that the introduction of anti-love biotechnology may lead to the pathologizing of ordinary behaviour. Finally, she acknowledges the limits of her bioconservative position in cases of paraphilia—such as paedophilia and attraction to non-consenting people—that pose a serious threat to the object of an individual’s love. Kit’s paper is impressive in its considerable scope, its clear structure, its display of critical and incisive thinking, and its rigorous analysis of profound questions. As a whole, this exemplary paper is a pleasure to read.

—Karola Kreitmair

Arguing for a Bioconservative Approach to Regulation of Anti-Love Biotechnology

Kit Ramgopal

With newfound ability to inhibit human love comes the need to determine an ethical stance as to when use of this “anti-love” biotechnology is permissible. Bioethicists agree on the beneficent potential of this treatment in the correction of dangerous loves but differ on how liberally it should be employed. The bioliberal view is that love biotechnology should be used to improve a person’s well-being by minimizing emotional pain. Conversely, the bioconservative approach believes that risks of the technology warrant extreme caution and thus only support its use when absolutely necessary (McArthur). This paper analyzes the current state of anti-love biotechnology within the framework of drug distribution and societal development to conclude that a presumption of stringent restraint is morally required at this point in time. By analyzing threats to both societal and individual justice and consequential analysis of data on risks and benefits, this paper concludes that anti-love biotechnology should only be used when the harmful love in question hinders an individual’s ability to function as a law-abiding member of society and cannot be mitigated with time and distance.

First, we will present five reasons to support the presumption of restraint, which include the dangers of medicating as an alternative to facing adversity, global reduction of an individual’s capacity to love, harmful side effects, threats to sexual diversity, and distribution controversies. We will analyze Earp’s four premises for the use of this technology in the context of specific cases of harmful love and conclude that the prerequisites are too reductionistic and unsupported for practical employment. Finally we will present the example of paraphilia as a case where anti-
love biotechnology is ethical. The harmful love is a mental condition that does not diminish with time and distance from the love in question and that threatens both society and the individual to a degree that outweighs the risks of the technology.

This paper finds five primary reasons to support a position of stringent restraint- the value of emotional adversity in psychological development, the treatment’s side effects, diminished capacity for all types of love, reduction of sexual diversity, and the unresolved conundrum of distribution equality. The first reason to support restraint is the concern that allowing people an easy exit from emotional suffering could lead to stunted psychological development and a lasting, untreated unhappiness (McArthur). Why is it ethical to stop physical suffering and unethical to stop emotional suffering? For one, physical pain has no effect on recovery success—a broken leg heals the same regardless of whether the patient is in pain during the process. Meanwhile, emotional suffering is arguably integral for meaningful healing because it motivates growth and maturity (Platinga). Secondly, the ability to work through differences and forgive mistakes is essential to forming meaningful, long-term relationships. Reiterating that relationships require work may be cliche, but the truth is that humans are imperfect, often irrational beings, and relationships between them are doomed to face rhythms of discordance. With anti-love biotechnology, people may be tempted to numb their immediate pain and avoid putting in the effort to resolve the problem. We risk finding ourselves grappling with a longer, less treatable unhappiness, “trapped in the same endless, destructive cycles throughout their various relationships” (McArthur, 4).

The second reason is that these drugs work globally rather than selectively, reducing one’s overall capacity for love, not just one’s love for a specific person (Meyer). Love is scientifically defined as interaction between lust, attraction, and attachment, which can individually be traced to certain neural correlates. Lust is associated with estrogens and androgens, attraction is associated with catecholamines, and the attachment system is associated with vasopressin and oxytocin (Fisher). Because these hormones are integral actors in all relationships, anti-love biotechnology can only work by diminishing one’s ability to feel all types of love, romantic or not. Patients receiving treatment recorded “less ability to cry, worry, become angry, desire sex, or care about others feelings” (Opbroek et al, 148). It logically follows that if a patient is seeking treatment to maximize well-being, the person should only use technology when the harm of the love in question outweigh the benefits of love in general. There is debate as to how much moral significance we can even attribute to

1 80% of patients interviewed for this study University of Arizona study experienced “severe” emotional blunting. This has been speculatively traced to reduced metabolism in the anterior cingulate, which is targeted by SSRIs being observed in the study (Opbroek, 150)

the principle of informed consent in this case. A person afflicted with this degree of emotional pain that has driven them to seek anti-love drugs may not be rationally ordering first and second order desires (Anderson).

The wide person-affecting ramifications of these drugs could also infringe on principles of justice. Suppose someone decides they would rather be emotionally detached than live with the harmful love in their life. Is emotional detachment fair to the other people who have relationships with that person? What about parents, siblings, friends, daughters, and sons? These people will undoubtedly experience pain resulting from unreciprocated love for the initial patient. By promoting detachment to minimize emotional pain for one person, we may actually by maximizing overall emotional pain for all of the other people that have relationships with that person.

The third caution lies in side effects. Anti-love technology treats love by inhibiting hormones that cause feelings of love, thereby inhibiting all other functions of that hormone. For example, when dopamine is reduced to mitigate attraction intensity, individuals are no longer able to extract the same degree of pleasure from activities like exercise, meditation, music, sex, and food (“Dopamine Function”). Similarly, alterations to oxytocin levels inhibit human attraction, but also conjunctionally affect sex, reproduction, social behavior, social skills, generosity, learning, memory, and empathy in the patient, even interfering with bonding between mother and infant (Nissen et al). Studies also show that alterations in hormone levels affect different people in radically different ways, depending on how they question views his or her relationships beforehand (Yong).2 By inhibiting multipurpose hormones, we are fundamentally altering how people perform innate functions in ways that we cannot even predict.

There are also physical complications. Anti-attraction medication is correlated with high risks of sexual dysfunction (Meyer).3 In another case, twelve patients treated with anti-lust drugs and there were complications in all twelve cases, including nausea, vomiting, inability to have an erection, complete absence of sexual feeling, severe depression, and bone mineral density loss (Kaplan et al). Overall, widespread side effects of this treatment support the need to restrain use of these drugs when they are not necessary.

2 In the study, subjects sniffed oxytocin and were asked to measure the state of their social ties. For example, in the case of ties with one’s mother, the subjects with an originally more anxious view of their relationship with their mother took a dimmer view about their mother after sniffing, while those who were more secure about their relationship remembered their mother more favorably after sniffing (Yong 1).

3 This pattern is mirrored across treatments. See Opbroek, Nissen, and Fisher for further examples.
Fourthly, allowing people to select against loves that do not conform with normative sexual preferences could pose a threat to sexual diversity. Individuals may feel social, economic, and legal pressure to use technology to inhibit their natural attraction complexes (Gupta). Earp and his colleagues find that the right of the individual to select against homosexuality is ethically founded in “autonomous decision of each individual to engage in her own process of ‘becoming’ who and what she seeks to be, in accordance with her personal goals and values” (Earp et al, 13; Gupta). However, this understanding of personal autonomy conflicts with social justice. With decrease in sexual diversity comes increased stigmatization of non-normative practices and thus a step backwards in the quest for societal acceptance. Selecting against non-normative loves may improve the life of a certain individual, but these effects our outweighed by risks to society as a whole. Additionally, pressure of anti-gay, racist, and inter-class bigotry raise concerns that individuals would not truly be acting autonomously. Religious indoctrination, familial coercion, community pressures, and other social forces undermine the freedom required for genuine autonomy (Earp et al). Therefore, bioliberal arguments that find ethical validation in maximizing individual well-being are invalid because these drugs affect all of society.

Fifthly, we focus on unresolved practical debates, which bioliberal arguments avoid by arguing on a basis of principle rather than practice, an insufficient lens for forming regulations (McArthur). Will these drugs be over-the-counter or prescription? Will public aid fund their development or improvement? Will they be covered by public and private health plans?

There is no easy answer. Our society has a well-documented tendency of overmedicating (National Institute of Drug Abuse). If these drugs are over the counter, their usage could become commonplace, threatening organic pair-bond formation (Kotz). We have to ask whether a world in which a portion of our population is emotionally stunted is a world we want to live in. Emotional pain certainly ranks among the greater trials of the human experience, but our ability to live passionately as a result of it has defined the legacy of human creativity, immortalized in our art, music, and literature. Furthermore, free market dynamics raise concerns that drug companies will market relationship “diseases” so that they can profit from unnecessary cures (Robson). If these drugs are not over-the-counter, we face the issue of deciding when they should be prescribed. The most popular outline for determining when these drugs should be employed is articulated by Earp and his colleagues.

Earp’s first prerequisite is “the love in question is clearly harmful and needs to be dissolved” (Earp et al, 11). While logically sound, this prerequisite does not translate to practical application. One can not conduct consequential analysis of love in a way that respects justice and personal autonomy. What constitutes harm, and what degree of harm is enough? Who is to decide when the love in question is clearly harmful? Love is highly subjective and private. No outside authority, including family, police, and doctors, know the full, objective details of any given case. The only people fully present for the love are the lovers in question, who are too subjectively close to the topic to conduct a medically and legally valid analysis (Robson). A relationship can also feel incredible one day and unbearably painful the next. When asked if relationships are harmful, women’s responses vary drastically depending on the state of their relationship in the moment. Consider the clearly harmful case of domestic abuse. Earp points out that abused partners stay in the relationships because they have strong emotional bonds with their abusers. “I loved him so much [that] I believed him when he said it wouldn’t happen again,” the woman in Earp’s case study reported (Earp et al, 11).

The second prerequisite is informed consent of the patient (Earp et al). However, it is paradoxical to place so much ethical value in a person’s desire for anti-love technology when the purpose of the treatment is to correct one’s desires (McArthur). Earp tackles this inconsistency by providing a third provision: the technology helps people follow higher-order goals, not lower order feelings (Earp et al). This principle is impractical because most people do not have clearly identifiable, ordered desires. It also does not follow that the voluntariness is the result of a second order goal (McArthur). An individual may have a first order goal of emotional detachment to numb a heartbeat and seek technology. Consent is voluntary but could be contradictory to a higher goals of starting a new, healthier relationship. Earp places enormous value in desires of individuals grappling with difficult loves, even though these desires are often fickle and irrational.

There is also problem with Earp’s fourth provision of “necessity” (Earp et al, 11). Love, in and of itself, is a state, not a condition, proven to reduce naturally with time and distance (Ben-Ze’Ev & Goussinsky). Considering the emotional risks and physical side effects of the drugs, the necessity argument is undermined by the lack of proof that anti-love technology works better or more consistently than traditional methods of behavioral therapy, time, and distance. Some argue that treatment is necessary to remove someone from a relationship that they otherwise not leave, such as domestic abuse and love for a cult leader (Earp et al). However, this argument violates patient consent. If the drug is medically necessary to get the person out of an abusive relationship, then the person in the harmful love is likely unwilling to seek time, distance, and therapy away from their abuser (Ben-Ze’Ev & Goussinsky). If the issue is that victims may be unwilling to seek help, we face
the same lack of consent whether the help is medical or non-medical, making them ineligible for treatment under Earp’s standards. Furthermore, even if the victim is willing to undergo anti-love treatment and not traditional therapy and lifestyle changes, the treatment still is not medically necessary because another safer, effective treatment exists. It is merely preferable.

One notable case exception is paraphilia—disordered, recurrent sexual behaviors or urges generally involving nonhuman objects, suffering or humiliation of oneself or one’s partner, or children or other non consenting persons (Beech). The condition is a mental illness that impedes an individual’s ability to abide by social norms and laws (McManus et al). However current treatment for paraphilia emphasizes punishment, not prevention; paraphiliacs are not legally protected by mental illness statutes and risk becoming social pariahs and their lives collapsing if they seek help. Meanwhile, this isolation and lack of treatment only increases risk of committing a crime. Therefore, paraphilia is an example of a love that poses a serious threat to the afflicted individual and society (Kaplan et al).

Furthermore, paraphilia is the only general case study of harmful love that is clinically proven to not to resolve naturally with extended time and distance away from the object of harmful love (McManus et al).4 Because the harmful love cannot be alleviated with time, distance, or cognitive-behavioral therapy, and because paraphilia poses a pressing harm to individuals and society, there is an ethical case to use anti-love biotechnology to seek a solution. This case is supported by studies which prove a positive ratio of symptom alleviation to negative side effects (Beech).

Overall, anti-love technology has the ability to alter the foundations of the human capacity of love, and thus the foundations of human identity and society. There are five reasons to support a framework of restrictions for these drugs, which are the value of emotional adversity, global effect on relationships, side effects, threat to sexual diversity, and distribution controversies. This paper rejects Earp’s four conditions for use of anti-love drugs as functionally impractical due to an inability to enforce an objective definition of harm, reductionist view of human desire, and lack of proof that the treatment is ever genuinely necessary. It does, however, find paraphilia a permissible case for use of the treatment because the technology it is the only effective treatment and paraphiliacs pose a clear danger to themselves and society.

4 Research from University of Birmingham suggest that cognitive-behavioral therapy such as aversion and reconditioning shows little evidence of effectiveness (Beech & Harkins). However, since 2000, there have been several case studies on the pharmacology of the anti-androgens used in treatment of paraphiliacs. Anti-androgens, progestogens, and LHRH-agonists have proven to have significant effects on sexual drive and are widely concluded by researchers to be a promising treatment for paraphiliacs (Guay).


