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Margaret F. Gibson
Renison College of the University of Waterloo

Patty Douglas
Brandon University

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Disturbing behaviours: O Ivar Lovaas and the queer history of autism science

Margaret F. Gibson, Renison College of the University of Waterloo and Patty Douglas, Brandon University

Abstract

This paper “queers” the history of autism science through an examination of the overlap between the regulation of autism with that of gender and sexuality in the work of Ole Ivar Lovaas. Lovaas is the founder of Applied Behaviour Analysis (ABA), the most commonly used and funded autism intervention today that seeks to extinguish autistic behaviors, primarily among children. Less commonly recognized is Lovaas’ involvement in the *Feminine Boy Project*, where he developed interventions into the gender identities and behaviors of young people. Turning to Lovaas’ published works, we perform a “history of the present” and argue that a queer disability studies lens opens up the richness of autism as a cultural nexus, and deepens understandings of intersecting and contested histories of science, professional scopes of practice, and dominant futurities. The article makes a significant and timely contribution to understanding the disabling material effects of autism science in the lives of autistic persons. In particular, this case study highlights the need for feminist science studies to further investigate the historical and contemporary links between dominant scientific constructions of disability, gender, and sexuality.

Keywords: autism, gender, sexuality, history of science, queer theory, disability studies

On April 27, 2016, autistic writer and activist Amy Sequenzia posted an article on the Autism Women’s Network website entitled “Autistic Conversion Therapy.” In it, she described her reaction to the newspaper headline, “Obama calls for end to ‘conversion’ therapies for gay and transgender youth.” She agreed with the US President that any “expert” intervention that attempts to change who young people are in terms of their sexuality and gender identity is both violent and immoral. She also shifted some words around in her reading of the article to consider a similar challenge to the dominant ‘expert’ treatment of autistic young people, Applied Behavioral Analysis (ABA). ABA is the most commonly used and funded autism intervention today that seeks to shape ‘normal’ behaviours in autistic children while extinguishing those designated as autistic (Williams & Williams, 2011).

Sequenzia posted to Facebook:

I propose that every time we write or talk about ABA, that we also write or say: Autistic Conversion Therapy. Gay Conversion Therapy has a bad reputation now, even if it still happens. Both ‘treatments’ (tortures) have the same root. I want the supporters of ABA to own their objective. ABA: Autistic Conversion Therapy that uses torturous methods (Sequenzia, 2016).

Needless to say, this post created considerable controversy, with vehement supporters and challengers.

This paper interrogates the interwoven “root” of the therapies that Sequenzia describes, as seen in the overlapping approaches to changing the behaviors of ‘autistic’ and ‘gender-disturbed’ children in the work of UCLA psychologist Ole Ivar Lovaas. Lovaas is widely recognized as the founder of Applied Behavior Analysis or ‘ABA’, the most commonly used and funded autism intervention today. ABA seeks to shape ‘normal’ behaviours in autistic children while extinguishing those designated as autistic. In this article, we examine Lovaas’ published journal articles from 1965 up to 1988, including his most famous—and still-cited—1987 article which (in)famously claims that ABA therapies caused 47% of the children treated to become “indistinguishable from their normal friends” (p. 8).

Less commonly recognized is Lovaas’s simultaneous involvement in the *Feminine Boy Project* during the 1970s, where he catalogued and developed interventions into the gender and sexual non-conforming identities and behaviors of young people (Burke, 1997; Dawson, 2008; McGuire, 2016; Silberman, 2015; Yergeau, 2018). He engaged in the latter project while funding, supervising, and collaborating with his student, George Rekers, who continues to be a central if controversial advocate for so-called gay and trans “conversion therapies”. In this lesser-known project, Lovaas catalogued and developed interventions into the gender and sexual non-conforming identities and behaviors of young people (Burke, 1997; Dawson, 2008; McGuire, 2016; Yergeau, 2018).

Here, we perform a “history of the present” (Foucault, 1995) to problematize ABA as

a troubling—even dangerous—technique of power in our contemporary moment. In this, we join other disability studies scholars (McGuire, 2016; Tremain, 2015) who do genealogies to dislodge current social arrangements and regimes of power-knowledge that naturalize particular kinds of humans (i.e., non-autistic and gender conforming) as normal, and others as in need of containment and/or improvement. This is the first time to our knowledge that this approach has been brought together with queer disability studies and autism science history specifically, and as such represents a unique contribution of this article.

While we do not claim that Lovaas was the only contributor to ABA or to gender-shaping behaviorism, or that the root of these two sets of practices is indeed “the same”, our attention to these texts seeks to trace the work they are doing, including what “kinds of people” they produce (Hacking, 2006). Through the writing of Lovaas (and his co-authors) we can see the production of the un/under developed autistic person who lacks full humanity without early intervention (Sinclair, 1993; Yergeau 2018); the gender non-conforming or trans child who is doomed to miserable exclusion without intervention (Pyne 2016); the indispensable scientific experts and their unwavering staff members; and the freshly minted mother-therapists who were to take up home-based, boundless “development” work (Author; McGuire, 2016) on their autistic, gender-nonconforming or queer child.

The rationale for both areas of Lovaas’ work was largely theoretical, with autism and then gender non-conformity selected as excellent opportunities through which to justify the power and promise of behaviorism. In these experiments, autistic and gender non-conforming bodies became a kind of “dense transfer point,” to use Foucault’s term (1980, p. 103), through which different modes of power, including disciplinary and sovereign, began to operate. These were systematic attempts to slap, shout, reward, shock, and ignore autistic and gender non-conforming behaviors out of children. In the process, the experimenter-subject relationship became the rubric for professional and parent encounters with autistic and gender

non-conforming individuals, re-entrenching divides and justifying the imposition of coercive power between “developed” and “undeveloped” peoples, researchers and subjects, providers and patients, adults and children.

We use a queer, disability studies approach to consider queer, trans, autistic, and related ‘deviant’ identities as sociocultural and political phenomena. Thinking alongside queer/crip theoretical work by authors such as Eli Clare (2017), Robert McRuer (2018), Jasbir Puar (2018), and Alison Kafer (2013), Kelly Fritsch and Anne McGuire (2018), David Mitchell and Sharon Snyder (2017), and the queer autistic theorizing of Melanie Yergeau (2018), this approach means we work to disturb normal conceptions of the social and the “good life” that evacuate and devalue non-normative embodiments. Normative conceptions of the good life hold out the “cruel optimism”, in Lauren Berlant’s phrase, that such therapies will deliver an autism-free and gender-conforming future (Berlant, 2011). Cruelty lies in how the measurements and interventions of this ‘optimism’ dehumanize, coerce, regulate, and do bodily violence to those deemed in need of ‘cure’, while recruiting and training others (teachers, parents, community members) to extend this pathologization, even at a cost to themselves (McGee, 2013). We, in turn, hope to dislodge this now ubiquitous truth claim that without treatment—the earlier the better—an autistic, trans, or gender-nonconforming life is a hopeless life (Author; Sinclair, 1993). We are inspired by and ally ourselves with the work of Amy Sequenzia and other autistic scholars and activists who have called us to examine the histories and ongoing impact of ABA, particularly with the extensive critiques of Lovaas and ABA found in the work of Michelle Dawson (2004) and Melanie Yergeau (2018). We are also inspired by other movements, especially queer and trans movements, that have called attention to and work for ongoing responses to the “treatments” that have targeted and profited off of queer and trans people of all ages.

Michel Foucault’s work on how sexuality and desire operate to govern and regulate

subjectivity has been helpful in this project. In the writings of Lovaas and his colleagues we hear echoed concerns about the misdirected and unproductive desire that Foucault described as operating through the spectacle of the masturbating European schoolboy (Foucault, 1980; Stoler, 1995). When white, elite, (assigned) male children's behaviors were cast as desires gone awry, these behaviors were seen to threaten the future of the ruling class and colonial social order—and heighten the stakes of “intervention”, not only for the individuals so targeted but for the future of the nation or society. Such fears elevated psychological, medical, and educational experts and their associated knowledges, and denigrated the legitimacy of alternative desires, histories, and ways of knowing. Jasbir Puar (2018) has traced the operation of neoliberal imperialism through “debility” where populations are endemically marked as incapacitated in contrast with the exceptionality of “disability” among racial and national elites. We set out to challenge not only the framework of dominant futurities that project certain lives as debilitated, unliveable or exceptional, but also to support the possibility of alternative futurities that re-imagine queerness, transness, gender non-conformity, disability, and autism, particularly in the context of childhood (Clare, 2017; Kafer, 2013; Munoz, 2009; Yergeau, 2018). Finally, we are indebted to the work of others in queer feminist science studies who engage with “an ethic of undoing...an intellectual practice of getting underneath a seemingly self-evident idea, to understand the conditions of possibility for its intelligibility” (Cipolla, Gupta, Rubin, & Willey, 2017, 8). Here, we investigate how the self-evidence of “correction” and “treatment” has been rendered intelligible in the context of autistic and gender non-conforming lives, and in the potential for the violent coercion of young people more generally.

Surprising deviants? “Autistic” and “gender-disturbed” children as objects of study

Autism was, from its inception, a diagnosis of childhood, emerging through and alongside “childhood schizophrenia”, and appearing in Kanner as “early infantile autism”

(McGuire, 2016; Nadesan, 2008). The diagnostic category of autism is usually attributed to Leo Kanner's publication of the term in 1943 and Hans Asperger's separate use of it in 1930s lectures and a 1944 publication (Silberman, 2015; Waltz, 2013). Further, the creation of "autistic" children occurred in relation to and distinction from the more commonly recognized category of largely poor, often immigrant, and highly racialized category of "feeble-minded" people (Jack, 2014; McGuire, 2016; Nadesan, 2005). Autistic children emerged as objects of study and concern in a landscape where "feeble-mindedness" and "mental retardation" were primary eugenic concerns, representing racialized and classed varieties of disabled "unfitness" that many sought to prevent, reduce, or eliminate in both Kanner's United States and Asperger's Nazi-controlled Austria (Snyder and Mitchell, 2005).

With its persistent childhood focus in scientific literature, authors concerns about the possible future reproduction of autistic people became less urgently central than elsewhere in eugenic discourse. Silberman argues that Asperger argued that patients had future potential in direct distinction with other forms of childhood disability as part of trying to save them from the brutally efficient practices of eugenic murder that occurred under the Nazi regime (Silberman, 2015). Meanwhile Kanner noted that autistic children possessed a potentially 'normal' intelligence, and therefore capable of learning, improvement and even normalization (Kanner, 1943; Jack, 2014, pp. 52-3).

Importantly, then, from its inception, autism has been a way to describe what one could call **surprising deviants**; that is, autism emerged as a marker of children who did not fit pre-existing categories of the "unfit" (McGuire, 2016; Silverman, 2012). The children who became the basis for Kanner's descriptions of early childhood autism as a distinct if rare disorder, were overwhelmingly white and male, with unusually well-educated, middle-class parents who were themselves university professors or doctors (Kanner, 1943). The educational and professional achievements of the early patients' fathers and (in a more muted

and ambivalent tone) their mothers were front and centre in the early case studies, and in much of the writing on autism throughout the twentieth century. These patients were constructed as white, middle to upper-class—and, simultaneously, as rare examples of an unusual pathology that should not be confused with other childhood diagnoses or hereditary ‘taint’.

Similarly, while sexual and gender ‘deviance’ had long been associated with other markers of eugenic unsuitability by race, class, nationality, and “feeblemindedness”, sexological accounts had simultaneously noted the range of class, educational, and racial backgrounds from which these patients/subjects emerged (Author). Homosexuality, bisexuality, and transsexuality were not initially or primarily ‘childhood’ diagnoses along the lines of autism, but the possibility of gender or sexual ‘deviance’ springing up within the social and cultural elite was a particular pre-occupation of mid-twentieth century America. Especially in the wake of large-scale studies such as the Kinsey report, anxiety about the roots of such ‘deviance’ inspired much middle-class parenting advice (Terry, 1999). Even as some researchers tried to argue for less rigid sexual and gender norms alongside the Gay Liberation and Feminism movements of the 1960s and 70s, many others, including Lovaas and Rekers, described homosexuality and transsexuality as undeniably poor adult “outcomes” to be avoided by early intervention (Bryant, 2008). While homosexuality was delisted from the Diagnostic and Statistical Manual in 1973, this change did not eliminate the pathologization of sexual and gender deviance. Further, as a number of authors have argued, the removal of adult homosexuality as an approved diagnosis could be seen as an impetus to the development of “gender identity disorder” as a new diagnosis in 1980, and the general rise in treatment of children, particularly boys, for ‘feminine’ behaviours throughout the 1970s and beyond (Bryant, 2008; Sedgwick, 1991; Pyne, 2016).

Thus, it is not surprising that the “feminine boys” that came under Lovaas’ purview were also ‘surprising deviants’ in their class and racial background. Designated male, white, and middle-class, the children whose gender development so concerned Lovaas, Rekers, and colleagues embodied elite American futures at risk—futures that, should their development be ‘corrected’, were seen as at the core of their society’s own hopefulness. In the face of criticisms regarding the ethics of punishing and shaping gender behaviour, Lovaas and colleagues would argue that their intervention in these children’s lives was not only ethically justified, but an ethical imperative. In its attention to this societal elite, behaviorism’s promise to reorient these futures was held out as not only in the interest of the individual children, professionals, and parents, but also of the nation.

Lovaas and the Los Angeles Neuropsychiatric Clinic

A psychologist who grew up in Norway, Ove Ivar Lovaas began as assistant professor at the University of California, Los Angeles Neuropsychiatric Clinic, in 1961. There he worked with colleagues to develop and test an approach rooted in operant learning theory to treat ‘disturbed’ children, beginning early to focus on those with autism diagnoses. Lovaas’ experiments on autistic children used positive reinforcers for desired/‘normal’ behaviours – such as giving food, saying “good boy”, and or giving the child a hug or pat for attending to lessons or using spoken language, looking at, hugging, or kissing the experimenter upon request. They also used violent aversives: slaps, electric shocks and reprimands for undesired/autistic behaviours such as flapping hands, rocking, banging body parts against objects, climbing on furniture, not coming to the experimenter when asked, not hugging the experimenter, or averting their eye gaze. Unlike psychoanalysis, behavioural views of human learning and sociality are not interested in causes or the psychic interiority of human behaviour and cognition, although they typically accept biological views of the human. Instead, changes in the *external* environment result in changes in human cognition and

behaviour, and possibly even biology (Lovaas, 1977, 1984; Rimland, 1964, 1978; Skinner, 1963).

The role of “moral entrepreneur” and “expert” comingled in the figure of Lovaas, who lent scientific expertise as well as moral conviction to the emerging behavioural treatment regime of autistic persons (Author; Becker, 1963). The technologies involved were elaborate and precise, while also brutal and blunt. Electrified floors or prods and detailed measurement devices were used in some instances along with snacks, slaps, and daily monitoring checklists that could be more readily translated outside the experiment room. While initially hesitant about the capacity of parents to replicate the rigor of techniques being innovated in his UCLA laboratory, Lovaas’ experiments on autistic bodies extended the reach of scientific regulation to parents, and particularly mothers, whom he trained to be home therapists (Author; Lovaas et al., 1965, 1973; Lovaas, 1987; McGuire, 2016).

During this time, Lovaas also took on George Rekers as a graduate student and wrote the grant to fund what became The Feminine Boy Project (Rekers’ doctoral work). The methods were based in the same behaviorist traditions with the goal of increasing “masculine” behaviour, play and activities (e.g. playing with boys, choosing “boys” toys, engaging in “rough and tumble” play) and decreasing “feminine” behaviors, play and activities (e.g., playing with dolls, playing with girls, having swishy wrists). However, unlike the treatment of autistic children, no aversives were used in the treatment room with these children beyond the removal of positive response (Dawson, 2004). For example, the mother would say “good boy” and engage enthusiastically in response to ‘appropriate’ play and then turn away from the child and become non-responsive when the child chose the ‘wrong’ toys. At home, however, parents were trained to create behavioral programs to shape normative gender behaviors that could include striking the child (Rekers & Lovaas, 1974; Winkler, 1977; also see McGuire, 2016).

Appearing throughout both sets of articles is a description of the “optimism” posed by behaviorist treatment in contrast to the “pessimism” of failed treatments from other models. In the case of autism, Lovaas grouped biological and psychoanalytic psychiatry’s failures together as a “disease model”, explaining “One school postulates psychic damage, the other structural damage” (1979, p. 315). He then described the failures of both biological and psychodynamic approaches: “If the disease model had been a viable and effective model for treatment of autistic children, the behavioral model would not have seen the light of day... It was in this milieu of pessimism about the future of autistic children that behavioral interventions began” (p. 316). Hopelessness was a required ingredient inspiring Lovaas’s work.

The projected hopelessness of autism was presented through the failure of previous treatment attempts and “severity” of the children’s condition as well as terms of “prognosis”. For example, Lovaas et al. started their 1973 article on research with autistic children, “At intake, most of the children were severely disturbed, having symptoms indicating an extremely poor prognosis” (p. 131). Later they expanded in their description:

...we have treated the very undeveloped children, that is, children who would fall within the lower half of the psychotic continuum, and whose chances of improvement were considered to be essentially zero. Most of the children had at least one prior treatment experience (up to 4 yr of intensive, psychodynamically-based treatment) which had not effected any noticeable improvement. (Lovaas et al., 1973, p. 133)

The hopelessness of autistic children was used not only as justification for the intensive, costly, and often violent procedures that the intervention involved, but also as a tribute to the skill of the experimenter and the promise of his method to shift the future a “prognosis” set forth. The likelihood of ongoing institutionalization was a frequent shorthand signalling the autistic child’s hopeless future.

Similarly, the gender intervention articles began with a series of projected futures for the children that undergird the justification of the treatment, as well as its specific intensity

and methods. This rationale relied on detailed predictions of “serious disabling consequences for adults... [that] may range from interference with normal heterosexual relationship to a continuing sense of shame and fear of disclosure which can be extremely disabling” (Rekers et al., 1973, p. 6). Further, the prospect of adults choosing to alter their bodies using surgery or hormone treatment (in accordance with their felt gender) was flagged as more “harmful” future consequence of inaction: “Preventive intervention in early childhood is the preferred therapeutic strategy in view of the extreme resistance to change of cross-gender behaviors in adulthood and the ramifications of surgery and hormonal sex reassignment” (Rekers et al., 1973, p. 8). The authors even argued that without treatment these children may grow to be “easily exploited by medical professionals” (pp. 7-8).

Behaviorism’s optimism was produced in a narrative arc where “highly pathological” pre-intervention profiles were turned into profiles that were “indistinguishable from normal”. The title of the 1987 study by Lovaas tantalizingly touted a return to “normal functioning” for a subset of autistic children post-intervention and famously specifies, “School personnel describe these children as indistinguishable from their normal friends” (p. 8). A publication from the Feminine Boy Project provides a similar arc in its description of Kraig:

When we first saw him, the extent of his feminine identification was so profound (his mannerisms, gestures, fantasies, flirtations, etc., as shown in his ‘swishing’ around the home and clinic, fully dressed as a woman with long dress, with nail polish, high screechy voice, slovenly seductive eyes) that it suggested irreversible neurological and biochemical determinants. At the 26 – month follow-up he looked and acted like any other boy. (Rekers & Lovaas 1974, pp. 187)

Optimism also operated as a rationale for ongoing research/intervention: “One can entertain some optimism about behavioral treatment of gender role problems, but until more cases are reported, one can only entertain the most tentative hopes that such an effective treatment has been isolated” (Rekers & Lovaas, 1974, p. 188).

What made these children appropriate case studies for the display of behaviorism's optimistic promise? The status of 'surprising deviant' meant that the children selected were seen to hold promise and value if their development could be set on a 'typical' course. Thus, starting in his work with autistic children, Lovaas presented autism and, later, gender deviance, as both *hopeful enough* such that great benefit could accrue if effective intervention were found to redirect these children's futures, and *hopeless enough* in that no existing treatment had been found to offer 'recovery'. Thus, the value of an effective "treatment" was initially cast as a way to help the children of desperate parents who had the means to find and fund new approaches. The apparent hope of a dramatic retreat into "indistinguishability" would target and train the male elite of society, recruit white working mothers back into the home as adjunct therapists (Author), and burnish the glory of the researcher/clinician (Broderick, 2009). This sharp edge of autistic hopefulness/hopelessness opened up the possibility of testing and eventually disseminating radically different—even extreme or unethical— approaches, justifying treatment by any means.

Across Lovaas' articles about these two different groups of children, the point of continuity was the advancement of behavioral analysis as a form of time consuming, labor-intensive, necessary, and early intervention to redirect projected futures away from pessimism. Behaviourism was presented as a beacon of hope for discouraged parents and professionals alike.

Developing behaviors, redirecting desires

In Lovaas' articles a mechanistic view of the human emerges. Behaviourists altered behaviours through manipulations to the external environment, so that the person could be trained to adopt new ways of acting in the world and become more "functional" and

“independent” (Lovaas, 1977, 1984; Skinner, 1963). The goal of Lovaas’s research was also to see how many small learned behaviors, such as imitating syllables, could be used to build to larger changes, such as verbal speech. As such, the findings that mattered were thus the narrative of the research protocol and its carefully charted effects on target behaviors, not the perspectives of those being intervened upon. Even parent perspectives were largely limited to their involvement in the intervention itself, their use of various checklists and charts, and their accounts of the child’s pathology, change, or lack thereof.

The authors’ persistent arguments for the replicability of their findings can certainly encourage an understanding of Lovaas and his colleague’s work as a ‘how to’ guide for responding to ‘gender-disturbed’ and ‘autistic’ children. However, this is a limited reading, especially since the researchers themselves tended to highlight that the technical complexity of their work prevented a full and proper replication of their outcomes:

A relatively untrained person can build simple behaviors, like eye-to-face contact or raise the frequency of a vocal behavior. But it is unlikely that a person [not referring to an autistic individual but a trainer/therapist/parent] will be able to build complex speech unless he is familiar with discrimination learning procedures. Most people who work with autistic children are not. Therefore, it seems likely that there will be few studies in the near future to replicate the present one. (Lovaas et al., 1973, p. 136)

In this argument, Lovaas and his colleagues *become* the elements that made the outcomes possible. A planned but carefully controlled proliferation of these methods under their direction provided an effective business model, and supported the persistence of behavioural methods, technologies, and trainings across the decades. In other words, while others were certainly needed to do the labour of these intensive interventions—particularly mothers but also teachers and research assistants—the crucial component of the method was the conceptual and methodological prowess of the clinician-researcher in charge of this hierarchical system.

Bolstering this assertion of indispensable experts, these programs relied upon highly technical mechanisms: electrified floors or other devices for delivering controlled electrical shock (autism studies only), observation rooms with one-way mirrors, video recorders and players, and “multiple response recorders” that involved multiple push-buttons for real-time recording of observations. Most significant among their technologies was, however, the training of raters and others involved in standardizing the charting of behaviour. Many pages of instructions for observers are included in some articles, defining what and how to interpret and record the children’s behaviors, such as:

You will be watching for five kinds of behaviors. These will be the only behaviors you will have to record, so part of the time you may not be pressing a button at all. If you are uncertain about what is going on, you may also not be recording. *The best rule is, if you can’t make a decision, don’t record anything.* Each of the behaviors will be carefully defined and you will be given examples of what they are and what they are not. Each key on the panel is labeled with the name of one of the behaviors. Each time you notice the child engage in one of these behaviors, press down the corresponding key, and hold it down until the child has terminated that behavior. [Emphasis in the original]. (Lovaas et al., 1973, p. 137)

Autistic children’s behaviors were pre-categorized exclusively as: self-stimulation, echolalic speech (both considered pathological), appropriate speech, and two kinds of social non-verbal behavior (considered desirable). Similarly, in the gender-based interventions, detailed examples are offered of the types of toys and instructions the children were offered, and similar mechanical and instructional technologies were deployed apart from the absence of physical striking or electric shock apparatus. For example, Karl’s behaviors were to be recorded both in the clinic and the home using a checklist the researchers designed to record the following categories: feminine-gesture mannerisms, play acting of a feminine role, feminine play with sister, masculine play, and masculine play with brother (Rekers, Lovaas & Low, 1974). The first three categories of behavior were viewed as pathological (to decrease), and the latter two as normal (to increase).

The identification and meaning of the behaviors was thus up to the clinician-researcher, and not for the parent, the rater, and certainly not the child to identify. While the above passage cautioned that indecision was a sign that no recording should take place, under more specific categories raters were instructed not to miss opportunities to pathologize. For example, under “self-stimulation” the instructions read, “You may find yourself recording something you feel looks like any other child might do. Record it anyway. The difference is that you may see more of it than you might in a normal child” (Lovaas et al., 1973, p. 137). The diagnosis of autism turned individuals’ situational, moment-to-moment actions into either signals of pathology, or signs of the intervention’s effectiveness. All of the tallied results were then plotted on multiple line graphs that demarcated changes in frequency under the many stages and conditions of research over many months.

These designated targets of increasing and decreasing behaviors across both lines of research mapped a desired notion of development. The discursive power and intertwined associations of “development” allowed the articles to draw upon adultist, gendered, heteronormative, cisnormative, colonial, classed, abelist, and racist connotations simultaneously (Rohy, 2008; Stoler, 1995). Here there was some distinction between the lines of research, with more acknowledgement of possible controversies associated with the goal of the gender-based interventions than with the goal targeting “autistic” behaviors.

In the gender interventions, notions of correcting “development” were central, as in a section titled “Development problems suffered by gender disturbed boys”:

At the social level, the child faces rejection, ridicule, and isolation. He is frequently scapegoated in cruel ways and must tolerate the indignities of insulting labels... Moreover, however, the negative stereotypical labels applied to them, such as “sissy” and “fag”, markedly restrict their freedom to choose in an open fashion a course of behavior by which they might avoid sex role stereotyping. (Rekers et al., 1973)

In this passage, the authors used notions of “freedom” and “choice” to argue for the coercive construction of conditions that measure, observe, punish, and reward children without their

consent. Further, these texts deployed terms tied to disability, and autism in particular, through characterizing “gender-disturbed boys” as “rigid”, experiencing “compulsive desire”, and lacking necessary “abilities”; they demonstrated an “undesirable lack of flexibility”, or “compulsive sex-role inflexibility” (Rekers et al., 1973, p. 6). The authors argued that their work was consistent with the recent prominence of children’s rights and women’s rights by framing the goals in terms of “development”:

It is ethically appropriate to assist individuals to develop reasonable control over their own behavior, and the resultant sense of option and choice. The therapist’s goal, then, is not to merely exchange the compulsive cross-dressing for compulsive like-sex dressing but to provide the individual with rational control and reasonable options in his or her behavior. (1973, p. 7)

Thus, normative gender development produced rational, unconstrained, individualized notions of the human, with their resonant colonial, masculinist associations.

Within Lovaas’ published work, autistic behaviour was more routinely and less controversially associated with an undeveloped, primitive, pathological and non-relational humanity that was unaware of itself. The consistent denial of any deeper meaning or humanity to autistic children’s actions implicitly reproduced these associations, as did widely used words such as “severely undeveloped”. Occasionally, Lovaas and his colleagues drew explicit connections between the goals and methods of their interventions and middle-class, Western, colonial hierarchy:

Throughout, there was an emphasis on making the child look as normal as possible, rewarding him for normal behavior and punishing his psychotic behavior, teaching him to please his parents and us, to be grateful for what we would do for him, to be afraid of us when we were angry, and pleased when we were happy. Adults were in control. In short, we attempted to teach these children what parents of the middle-class Western world attempt to teach theirs. There are, of course, many questions that one may have about these values, but faced with primitive psychotic children, these seem rather secure and comforting as initial goals. (Lovaas et al., 1973, pp. 134-5)

This passage offers a particularly explicit explanation of the colonial underpinning to fears about white children’s behavior (Rohy, 2008; Stoler, 1995; Valverde, 2008).

As noted by Melanie Yergeau (2018), Lovaas' central emphasis on "self-stimulation" as the primary set of autistic behaviors to delineate and the first to target for elimination also links to legacies of masturbation discourse. Even among the gender articles, slippage from feminine behaviors to inappropriate sexual desires and masturbatory associations suggest that more was at stake than the immediate behaviors of the children Lovaas and colleagues described. The development of misdirected desires among these surprising deviants of male-designated, white, middle-class American children resonated beyond the bounds of either diagnostic condition to a questioning of how to shape colonial futures.

Behaviourism's ongoing legacy

What were the effects of Lovaas' rigid behavioural procedures and the resulting articles? First, the expert was simultaneously a provider of very hands-on clinical intervention and an experimental researcher. This experimenter-clinician was an absolute authority who set and frequently changed goals and rewards or punishments without consultation or even warning to the subject-patient. For example, a behaviour that had been rewarded consistently might suddenly no longer receive any response at all as an "extinguishment" phase started. Meanwhile, the recipients of behavioral intervention were defined entirely through their behaviors, as observed and interpreted by as many other trained/standardized people and with as high a level of consistency as possible. Thus, across the articles by Lovaas and his colleagues, the inner experiences of "autism" and "gender disturbance" were constructed as not only inaccessible, but entirely irrelevant. Under this rubric, the desires—and humanity—of people so described may become present only as objects to change, build, or erase, and ethical concerns such as consent were effaced. This belief is particularly apparent in Lovaas' early interviews about autistic children when he talked about his approach as "building a person" (Chance, 1974).

However, only a superficial reading of these documents would accept their insistent focus on “measurable behaviors” at face value. While these texts certainly attempted to refocus the reader’s/observer’s attention away from desires of the ‘gender disturbed’ or ‘autistic’ children themselves, “inappropriate desires” constituted a core component of both the interventions described and the knowledge produced. Consistent with Foucault’s discussion of the masturbating schoolboy (Foucault, 1980), these discussions of children’s ‘misdirected’ desires did not focus on the racialized Other, but on the children of the bourgeois elite.

What both groups of children apparently “wanted” was the primary reason they were seen as in need of intervention. In the Feminine Boy Project, children’s selection of what to play with was deadly serious. Children received reinforcements and punishments for as long as their play included the “wrong” wants. A boy stating that he “wanted to be a girl” was an indication of the need for gender training, and predictive of a feared future of transvestism, homosexuality, or transsexuality. In terms of scientific prowess, the authors used moments when their interventions seemed to change what a child “wanted” in an enduring way as testimonials to their own success. For example, one article described: “upon entering the room, Kraig said aloud, ‘I wonder which toys I will play with. Oh, these are girls’ toys here, I don’t want to play with them” (Rekers & Lovaas, 1974, p. 184). What Kraig “wanted” was the guarantor of enduring behavioural change, and the promise of ongoing “indistinguishability” from others.

The “wants” of individual autistic children in other studies were not explored as explicitly as those in the gender condition, however the selection of “reinforcers” that each child would “work for” was a key point of interest for the researcher:

We selected reinforcers on the basis of their value for a particular child. Many children would work only for food and required an occasional slap on the buttocks if the therapist was to control undesirable interfering behavior. For other children, symbolic approval and disapproval were effective in maintaining the

children's behavior throughout the working sessions. (Lovaas, Koegel, Simmons, & Long, 1973, p. 136)

Children who showed a desire for the approval of the therapist were seen as more 'developed' and with an improved prognosis. Their apparently 'normal' desires made their behaviors, in turn, more enduringly 'desirable' by the researchers' criteria.

As Sequenzia and other autistic self-advocates have highlighted, the imperative to take desperate measures to treat autistic behaviours through early intervention and 'recover normal functioning' in children remains a largely unquestioned logic and taken for granted truth within today's scientific milieu, as well as among parents, professionals, and policy-makers. While feminist and LGBTQ movements have made inroads in mainstream culture such that gender and sexuality 'conversion' therapies are under increasing censure, autistic self-advocates and critical allies continue to be marginalized as they assert autism as a viable way of being in the world. A queer disability studies approach to behaviourist autism science moves us beyond a rhetoric of hopelessness, flagging unspoken normative conceptions of the social within the ongoing regulatory and constitutive role of ABA as it constructs certain people as not yet human. A queer disability studies approach instead supports queer, autistic and alter embodiments and futures as vital, inventive, and viable (Kafer, 2013; Munoz 2009; Yergeau, 2018).

We end by listing a number of implications/future research areas to explore suggested by our detailed case study: (1) Lovaas' work simultaneously promoted the authority of the expert, particularly the role of psychologists, in definitions of pathology and their treatment, while widely dispersing behavioural techniques and their related view of the human as new technologies of the self, operating through the site of the family, education, and helping professions (Author; Gruson-Wood, 2016); (2) Lovaas' approach initiated a booming autism recovery industry and LGBTQ "conversion therapy" industry, asserting the need for urgent, very intensive (expensive), professionally-guided largely standardized approaches as the

best/only hope for these children and their future selves (Dawson, 2004; McGuire, 2016; Silberman, 2015). These standardized approaches simultaneously enlisted and regulated how parents were to care about autism and gender behavior as key practitioners while excluding those families who could not take up such intensive interventions; (3) The approach removed the possibility of following the needs, wants or present and inner experiences and desires of children labelled autistic or gender ‘disturbed’; (4) The approach ignored the interests and existence of adults so labelled, apart from the “bad outcomes” status; and, (5) Behaviorist responses to autism continued to subsume the relative value or interest of those who were *unsurprising deviants* through race, class, gender or intellectual/physical disability, and reinforced colonial associations of “underdevelopment” with biomedical and pedagogical interventions; and, (6) Finally, a focus on autism and gender non-conformity as children’s conditions that require and justify coercive intervention reinforces the duality of adult-child roles, and justifies capricious adult violence and total authority. If Lovaas’ tenets are followed, childhood desire is readily re-molded, and the re-education of deviant desires becomes a beneficent mission for enduring and hopeful futures.

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