Obsessive-Compulsive Spectrum Disorder in Darren Aronofsky’s *Black Swan*

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Abstract—
In the past decade, there has been growing controversy about the scope of Obsessive Compulsive Disorder (OCD) with some investigators suggesting that it should be removed from the “Anxiety Disorders” category and considered a spectrum syndrome. Support for the spectrum view of OCD comes from studies suggesting strong associations between OCD and other syndromes including psychogenic dermatomes, eating disorders, self-harm, and delusional disorders. The OCD spectrum is illustrated very effectively by Darren Aronofsky’s film, *Black Swan*. The film features a ballet dancer whose transformation from the role of the controlled, technically perfect White Swan to the impulsive, sexually seductive, Black Swan is accompanied by a growing number of OCD spectrum symptoms including delusions. The film would be very useful for triggering discussion of the OCD spectrum among mental health professionals and those in training.

Index Terms—Psychology and the Arts; Psychopathology; Obsessive–Compulsive Disorder; Psychology Education

I. INTRODUCTION

Obsessive-compulsive disorder, characterized by a repetitive pattern of intrusive thoughts that are briefly quelled by engaging in some ritualistic action, has historically, and is currently, classified as an anxiety disorder. However, as a result of accumulating research and the current revision of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2012), the classification and unitary nature of OCD is being re-evaluated. A number of investigators and clinicians have suggested that OCD is a continuum of conditions including compulsive weight control, hypochondriasis, tic disorders, body dysmorphic disorder, and trichotillomania and self-harm, as well as “grooming disorders” such as psychogenic excoriation ("skin picking") (Hollander, Braun, & Simeon, 2008). The film, *Black Swan*, depicts the OCD spectrum as it emerges in a ballet dancer—a profession in which OCD is likely to be particularly prevalent (Taylor, 1997).

Darren Aronofsky’s film, “Black Swan,” centers on Nina Sayers (Natalie Portman) a ballet dancer desiring to be cast in the lead of Swan Lake. In this version of the ballet, the lead dancer must portray both a “white” (undefiled, innocent, controlled) as well as a “black” (sexually seductive, spontaneous, uncontrolled), swan. Throughout the movie, Nina is torn between her long standing perfectionistic, rigid, and controlled personality and her director’s desire for her to explore a more spontaneous side of herself. As a result, Nina is fighting between the persona of an innocent perfectionist (the white swan) and the impulsive, emotional self she has never faced before (the black swan). A theme in Aronofsky’s recent films is the intense all-consuming drive for individuals to become perfect masters of their craft. He also uses cinematography very effectively to draw the viewer into the experience of his protagonists. The film is of considerable educational value—both in terms provoking academic discussions about the obsessive compulsive spectrum and for helping therapists better appreciate patients’ experience of OCD spectrum syndromes.

Black Swan: A Synopsis

Nina’s life revolves around ballet. All she seems to do is work at a prestigious dance company, come home, and attempt to further refine her technique. Her facial expression during the dancing is one of concentration and over-controlled tension. Aronofksy’s close-up shots of Nina’s face, together...
with her swollen feet, effectively convey this tension to the viewer. The dance company is a highly competitive atmosphere and one can feel the underlying hostility and jealousy that the other dancers have towards their successful peers.

The dancers are presented with a surprise audition by Thomas, the director (Vincent Cassel) who is seeking a lead dancer who must be able to transcend between the innocent white swan and the sexually seductive black swan. Initially, Nina’s audition did not go over well because Thomas believed she was too controlled and too much of a perfectionist to be able to switch between these contradictory roles. Nina’s determination to embody both roles resulted in her practicing to the point where she ended up splitting her toenail. She then decided to try to convince Thomas to change his mind, which resulted in an impulsive kiss between the two.

Nina’s mother (Barbara Hershey) is very controlling, obsessive, and appears to have no life outside of her ballet dancer daughter. Nina’s mother has a room filled with drawings of her daughter. When Nina wins the role of the swan queen, her mother purchases a large beautiful cake (their favorite flavor) in order to celebrate this achievement in her daughter’s life. When Nina declines a piece of cake, her mother suddenly becomes angry and hurt and starts to put the expensive cake in the trash. When she is not checking Nina’s skin for signs of excoriation, Nina’s mother is querying her daughter in detail about her daily ballet routine.

During Nina’s initial practice, Thomas tells her that with her technically correct dancing, she is an effective white swan, but that dropping her control to become the Black Swan will be a major challenge. After this criticism, Nina observes her mother suddenly becomes angry and hurt and starts to put the expensive cake in the trash. When she is not checking Nina’s skin for signs of excoriation, Nina’s mother is querying her daughter in detail about her daily ballet routine.

As it gets closer to the ballet’s opening night, Nina begins to experience more jealousy and competition with Lily. However, Nina also becomes more uncontrolled, spontaneous, and sexual—closer to the role of the black swan. For example, Nina becomes more experimental in her behavior at the nightclub by accepting the drugs and having a sexual encounter with Lilly. Nina also confronts Thomas about his perceived favoritism towards Lily.

At the opening night, Nina’s transformation becomes complete. After Nina accidentally falls on stage in the role of the white swan, Lily approaches her in the representation of the black swan and Nina stabs her with a piece of broken glass. Nina’s murder of her perceived rival presents no obstacles to successfully fulfilling the role of the black swan to audience acclaim. Again, the viewer is challenged at the film’s conclusion to distinguish between delusion and reality. However, this struggle likely parallels the conflicts experienced by Nina and those with severe OCD spectrum disorder.

Natalie Portman is believable in her role as the disturbed Nina Sayers and the transformation that overcomes her. The quality of the acting, cinematography, and music all combine to bring the audience into the conflicted, frightening, over-and-under-controlled emotional life of the protagonist. For example as Nina’s identity changes from the white to the black swan, the color of her clothing changes from pink to combined pink and black, to black alone. During the movie, it is hard to follow what is real and what is imagined. The movie makes one ask the question: Where do Nina’s delusions end and reality begin?

**Eating Disorders**

Ballet dancers, in particular, experience particular pressure to be thin and physically light—for appearance, ease of movement and because they are frequently lifted by another dancer during performances. Ballet dancers have been found to be at higher risk for eating disordered behavior and body image distress. (Ravaldi, Vannacci, Bolognesi, Mancini, Faravelli, & Ricca, 2006). However, Black Swan illustrates the limitations of our current formulations of eating disorders. Nina appears to minimize and monitor her diet with little effort. While apparently very controlled in her food intake, she also has frequent periods of what appears to be self-induced vomiting. At times, it is unclear whether the vomiting occurs as part of a surge in anxiety or is for weight control, or both. However, Nina appears to experience some temporary emotional relief immediately after these episodes. Similar to compulsive rituals, the vomiting appears to, at least temporarily, reduce anxiety. While research on the linkage between DSM-IV obsessive compulsive disorder and anorexia and bulimia nervosa is unclear, these eating disorders are associated with deliberate self-harm such as cutting (Yryura-Tobias, Neziroglu, & Kaplan, 1995) and psychogenic dermatoses such as skin picking (Whitelock, Eckenrode, & Silverman, 2006). The DSM formulation of eating disorders as categories is at some variance with research suggesting that in many young women, these symptoms exist on a continuum with subclinical eating disorders (Eating Disorder-NOS) that are likely to be more prevalent than categorical bulimia or anorexia nervosa (Franko & Omori, 1999).

**Psychogenic Dermatoses**

At several points in the film, Nina is distressed by a lesion on her upper back—at times covering it with makeup. It quickly becomes apparent that Nina has a history of severe
scratching and accompanying pruritic lesions (Arnold, Auchenbach, & McElroy, 2001). Nina often appears to be somewhat startled by the appearance of these wounds. This pattern is also consistent with “dermatitis artefacta” in which the patient typically is unaware of the origin and even denies any type of rubbing, scratching, or skin picking (Gupta, Gupta, Ellis & Koblenzer, 2005). The excoriation is often an automatic response to high levels of anxiety and at least temporarily, reduces emotional tension. The lesions on Nina’s back persist throughout the film and appear to signal her growing anxious turmoil. The unconscious nature of excoriation becomes apparent when Nina awakens with mittens on her hands. Her mother tells her that her scratching had become so intense while Nina was sleeping that she resorted to this preventive measure to prevent further skin damage.

Self-harm
While perhaps demonstrating some overlap with excoriation, Nina also exhibits deliberate self-harming behaviors. At multiple points in the film, Nina tears at her cuticles and the skin around her nails. When the skin around her nail beds becomes jagged and bloody, Nina engages in a disturbing ritual of pulling the skin along the length of the finger from the nail area. In a ritual that is terribly painful to observe, she then runs the raw skin under hot water. While most clinicians and researchers are familiar with deliberate cutting and burning of arms and legs as a form of self-harm, these behaviors actually exist on a continuum. In a study of university students, tearing at the skin around the cuticles was one of the most commonly reported forms of self-injurious behavior (Williams, 2000). Those engaging in self-harm often describe a sense of tension that precedes the act followed by a feeling of calm immediately afterwards (Crowe & Bunclark, 2000). From an experiential perspective, the emotional dynamics of self-injury appear very similar to the anxiety reduction following execution of a compulsive ritual. While more research is warranted on the association of self-harm with other OCD symptoms, several studies have found self-mutilation, eating disordered behaviors, and OCD to be common comorbid conditions (Yaryura-Robias, Neziroglu, & Kaplan, 1995).

Delusions
While Black Swan’s viewers, and probably Nina, herself, are never entirely sure where delusions end and reality begins, this experience does occur with a small group of patients with OCD spectrum disorder. The cognitive rigidity characterizing OCD may, in some instances, escalate to psychotic symptomatology. O’Dwyer and Marks (2000) note that while most OCD patients demonstrate insight into their condition and recognize that the obsessions are irrational, there are a small number of atypically psychotic OCD patients with delusions. While early descriptions of OCD conditions noted the overlap between obsessions and severe disorders of thought content, this perspective was replaced by a view that these patients had a psychotic condition—most commonly schizophrenia (O’Dwyer & Marks, 2000). However, Lelliot and Marks (1987) describe a 17 year old male with OCD who “[w]hile watching television …looked up and saw a man’s face at the glass kitchen door and heard a voice say” ‘Do the habits and things will go right.’” (Cited in O’Dwyer & Marks, 2000; p. 281.)

During the turmoil of embracing the role of the black swan, Nina has an analogous experience while riding the subway. She sees a much older, well-dressed man, who initially makes kissing noises while staring at her, followed by lascivious gestures with his mouth, and finally repeatedly grabs his crotch. The film suggests that Nina appears to experience the man as real, becomes frightened by him, and that the event is connected to her own distress about her sexual desires being triggered by her ballet role.

Family Dynamics
Nina’s mother is very controlling and treats her daughter like a much younger child. Nina’s bedroom, in the apartment she shares with her mother, is more fitting for an eight-year-old girl than an adult woman. There are pink butterflies on the wallpaper, a frilly bedspread, an array of stuffed animals, and children’s furniture. Nina’s mother repeatedly communicates contradictory messages to her daughter which likely reflect her own ambivalence about her daughter’s success. While encouraging Nina to achieve the success in ballet she was unable to attain, she also placates Nina into possibly accepting a lesser role and discourages her from working too hard.

Aronofsky’s cinematography of the apartment that Nina and her mother share communicates the growing claustrophobia that Nina experiences at home. However, mother’s presence extends beyond their shared apartment. Nina’s cell phone rings throughout the movie – it is always "mom" on the phone’s pink screen backdrop. If Nina does not answer the phone, mom persists in calling. While there are certainly genetic influences on OCD spectrum conditions, parents also support and accommodate OCD behaviors. Of interest, OCD symptoms are more severe among children whose parents accommodate and participate in their rituals as well as provide frequent reassurance about their child’s fears (Storch, Gefken, Merlo, et al., 2007).

This tightly ordered, self-contained universe does not allow outsiders. When Lily comes by the apartment to ask Nina to go out with her, mother answers the door and tells Lily that Nina is not there. Nina however immediately goes to the door and seeks out Lily before she leaves the outer hallway. During their brief hallway exchange, Nina’s mother twice opens the door urging Nina to come back inside for dinner. The only way that Nina can do the unthinkable—leave the household for an evening with Lily— is to quickly snatch up her things and rush out the door while mother is calling anxiously behind her.

Aronofsky effectively conveys Minuchin’s concept of enmeshment – the absence of individual emotional and even, appropriate physical, boundaries between parent and child (Minuchin, Rosman, & Baker, 1978). The pressures on Nina coming from her mother are initially accepted as part of the burden of success. However, through Lily, and to some extent with the aid of Thomas, Nina is able to see herself apart from the cocoon in which she is wrapped with her mother. At Thomas’s urging, Nina masturbates as a means of bringing out
the sexuality needed for successful portrayal of the Black Swan. While the film’s ambiguity between delusion and reality leaves the viewer wondering whether some of these disturbed mother-daughter boundaries are perceived or “real,” a dramatic boundary breakdown occurs when Nina is masturbating- only to become panic stricken when she glances over and sees her mother asleep in a chair by her bed.

II. CONCLUSION

The term “Cinemeducation” describes the use of feature films to depict diseases, their treatment, as well as professional-ethical conflicts in medical education (Alexander, Lenahan, & Pavlov, 2005). While these cinematic portrayals may, at times, overly simplify or exaggerate symptoms of psychiatric illness, film can make learning about these conditions both enjoyable as well as memorable. Film has a vivid quality not typically conveyed through textbooks or lectures. As the director of Black Swan, Aronofsky has successfully conveyed the experience of obsessive-compulsive spectrum disorder. The film has a powerful ability to make the viewer experience viscerally the anxious preoccupation with control characterizing those who have OCD spectrum symptoms. In the context of the controversies surrounding the potential revision of obsessive compulsive disorder in the upcoming DSMV, Black Swan highlights how the related symptoms of obsessions, ritualistic behavior, eating disorders, self-harm and even transient delusions may co-exist and worsen under stress. As such, the film should provoke much educational discussion among mental health professionals, students, and those in clinical training.

REFERENCES


