

2014

# Paranoid Schizophrenia in the Media

Sarah Pawlicki  
*Parkland College*

---

## Recommended Citation

Pawlicki, Sarah, "Paranoid Schizophrenia in the Media" (2014). *A with Honors Projects*. 116.  
<http://spark.parkland.edu/ah/116>

Open access to this Article is brought to you by Parkland College's institutional repository, [SPARK: Scholarship at Parkland](#). For more information, please contact [spark@parkland.edu](mailto:spark@parkland.edu).



# Paranoid Schizophrenia in the Media



By Sarah Pawlicki



When asked the question, “What is the most severe mental illness?” many reply “Schizophrenia,” perhaps without fully understanding what the disorder entails. There are many popular misconceptions about schizophrenia, yet a loved one being diagnosed with schizophrenia would strike fear into anyone’s heart. What is this illness, so misunderstood yet so dreaded? Paranoid schizophrenia is the most common type of schizophrenia, and also the sort most frequently portrayed in the media--- one of the forums in which the public frequently receive unquestioned misinformation about schizophrenia.<sup>1</sup> However, there are several incisive and heartfelt films depicting paranoid schizophrenia. In this essay, I’ll discuss four such movies: *The Snake Pit*, *The Soloist*, *Benny and Joon*, and *Pi*. *The Snake Pit* was filmed in 1948, and is heavily influenced by Freudian concepts which are less relevant in today’s treatments of paranoid schizophrenia. Yet, it accurately describes the delusions associated with the disorder, and chillingly exposes the harsh forms of treatment used on schizophrenic patients in the past. *The Soloist*, based on a true story, beautifully depicts the life of Nathaniel Anthony Ayers, a gifted musician who had to drop out of Julliard after the onset of his paranoid schizophrenia. During the film, we see both Ayers’ fundamental psychoticism and his overwhelming talent. While *The Soloist* in no way glosses over Ayers’ disease, it chooses to confront schizophrenia with hope.<sup>3</sup> I will also discuss *Benny and Joon*, which touchingly shows how a family is affected by mental illness, and also depicts how paranoid schizophrenia is treated today.<sup>4</sup> The dramatic, experimental *Pi* I discuss last. *Pi* features a brilliant yet unstable mathematician, Maximillian Cohen, struggling to separate reality from hallucination.<sup>5</sup> All of these films have merit, showing that misinterpretations of schizophrenia, while prevalent, are in fact balanced by more accurate depictions of this complex disorder.

The term “schizophrenia” is derived from Greek, and can be translated as “split mind.”<sup>6</sup> This does not indicate multiple personalities, as in dissociative identity disorder; it means a schizophrenic person is split from reality, and the different components of their mind--- logic, language, spatial functioning, etc. --

- tend to function independently of each other.<sup>7</sup> The diagnostic label “schizophrenia” was created by acclaimed Swiss psychologist Eugene Bleuler around 1908.<sup>8</sup>

Schizophrenia is thought to develop in a complex way--- due to both biological/genetic and socio-environmental factors.<sup>9</sup> Because of schizophrenia’s typical age of onset (late adolescence for men, young adulthood for women), clinical researchers have deduced schizophrenia is likely a neurodevelopmental disorder.<sup>10</sup> Schizophrenia tends to run in families, suggesting a hereditary basis, and identical twins (who share all their genetic information) are more likely to both have schizophrenia than fraternal twins are.<sup>11</sup> If one identical twin is schizophrenic, there is a fifty-three percent likelihood the other twin will also develop schizophrenia.<sup>12</sup> If one fraternal twin has schizophrenia, there is only a fifteen percent chance their twin will also develop schizophrenia.<sup>13</sup> (However, there is a disorder called schizotaxia, which is sometimes experienced by family of a schizophrenic person.<sup>14</sup> Schizotaxia is described as a “psychosis-risk state,” in which the afflicted doesn’t have full-blown schizophrenia, but experiences mild non-psychotic symptoms of schizophrenia, such as social withdrawal and emotionlessness.<sup>15</sup>) However, the observable fact that complete sharing of a specific genetic background doesn’t guarantee shared schizophrenia indicates environmental and social factors are at play. Also, the specific genes which influence or trigger the development of schizophrenia weren’t found in the course of the Human Genome Project, concluded in 2006.<sup>16</sup>

One of the most frequently employed hypotheses regarding the development of mental disorders is the diathesis-stress model, which suggests a person may inherit a genetic predisposition toward a disorder, but require an environmental trigger to develop the disorder.<sup>17</sup> For example, both identical twins in a particular family might have a latent tendency toward schizophrenia, but one twin had a traumatic experience the other twin was fortunate enough to miss. The diathesis-stress model is supported by the fact schizophrenia often onsets in an individual during an intensely stressful period of time for them.<sup>18</sup> These social or environmental effects are referred to as epigenetic effects, or “the ways in which the environment can modify the output of the genome.”<sup>19</sup> Without a trauma or some other external triggering

mechanism, a gene may lie dormant.<sup>20</sup> With environmental prompting, a formerly unexpressed gene might cause devastating effects, such as the onset of paranoid schizophrenia.

Schizophrenia is considered by most mental health specialists to be a brain disease, not a cognitive/behavioral disorder.<sup>21</sup> There are many facts supporting this opinion, foremost among which is that brain atrophy is observable in twenty to fifty percent of individuals suffering from schizophrenia.<sup>22</sup> In the severest cases, such physical indicators of disorder as enlarged ventricles, which unproductively take up room meant for functional brain structures, are present.<sup>23</sup> Patterns of metabolic activity in the schizophrenic brain are also unusual; their brains' low metabolism indicates a reason schizophrenics may have a difficult time reacting to fast-paced stimuli---their brains can't effectively keep up.<sup>24</sup> Also, blood flow to the frontal cortex, the part of the brain responsible for logical thinking, motor functions, and problem solving is decreased significantly in the schizophrenic brain.<sup>25</sup> This could explain the difficulties many schizophrenic patients have with maintaining concentration, controlling their limbs, and logically connecting abstract ideas.<sup>26</sup> However, schizophrenic patients tend to be able to perform relatively complex spatial tasks, such as rearranging objects in a box so a new circular object can fit in the middle of the box.<sup>27</sup> This can also be explained biologically. The right brains of schizophrenic persons tend to function with far less impairment than their left brains.<sup>28</sup> The right brain is largely responsible for visual/spatial functioning, whereas the left brain has greater control over language and logic.<sup>29</sup> The dysfunction of the left brain seen in schizophrenia is thought to cause language-oriented symptoms, such as word salad (the disorganized connection of seemingly random words) and alogia (absence of speech), as well as difficulty connecting thoughts in a standardly reasonable fashion.<sup>30</sup>

Not only is the structure of the brain abnormal in most schizophrenic patients, they also experience abnormal levels of particular neurotransmitters.<sup>31</sup> The dopamine hypothesis, postulating elevated dopamine levels are responsible for the primary symptoms of schizophrenia (hallucinations and delusions), is now famous.<sup>32</sup> This theory was derived from the fact most effective neuroleptics were found to be dopamine D2 antagonists, preventing dopamine's effects.<sup>33</sup> Dopamine agonists (like amphetamines),

which act like dopamine, created psychotic symptoms similar to those seen in schizophrenic patients.<sup>34</sup> The dopamine hypothesis is also supported by research showing a significant portion of schizophrenic patients have more neuronal receptors for dopamine than controls did.<sup>35</sup> But of course, schizophrenia couldn't be as simple as a single elevated neurotransmitter---there are probably other neurotransmitters involved. Researchers now believe glutamate, the primary excitatory neurotransmitter in the nervous system, also plays a significant role in producing schizophrenic symptoms.<sup>36</sup> Since glutamate serves such an important purpose, its influence throughout the nervous system is widespread, making it a primary candidate for many of the diverse symptoms of schizophrenia.<sup>37</sup> Many researchers believe glutamate malfunctions trigger the dopamine malfunctions seen in schizophrenia, as glutamate has the opportunity to interact with dopamine on a large scale.<sup>38</sup> Also, employing glutamate antagonists produce psychotic symptoms like those seen in schizophrenia, and intensify symptoms in people suffering from schizophrenia.<sup>39</sup>

There are several types of schizophrenia, as well as various disorders within the schizophrenia spectrum (such as schizoaffective disorder and schizoid personality disorder).<sup>40</sup> In this essay, I will focus on paranoid schizophrenia, the most common form of schizophrenia today.<sup>41</sup> (Earlier in the treatment of mental illnesses, catatonic schizophrenia, where the patient is unresponsive and demonstrates “waxy flexibility”---the ability to be posed in an uncomfortable position but not show an inclination to move--- was most common.<sup>42</sup> It is now thought catatonic schizophrenia may result when other forms of schizophrenia---paranoid, disorganized, or undifferentiated--- is ineffectively treated.<sup>43</sup>) According to one authority, “The hallmark of paranoid schizophrenia is a preoccupation with one or several delusions or persistent auditory hallucinations.”<sup>44</sup> Paranoid schizophrenics normally suffer from persecutory delusions or delusions of grandeur.<sup>45</sup> The patient may “harbor a sense of unremitting suspicion and may appear tense, guarded, and reserved to the point of vagueness or even mutism.”<sup>46</sup> Paranoid schizophrenics are considered higher-functioning than patients experiencing other forms of schizophrenia, but, by the nature of their illness, they are at a higher risk for suicide and perhaps even violence, as their reality is a

frightening place.<sup>47</sup> However, if they seek treatment and cooperate with experts' advice, the prognosis for paranoid schizophrenia is more optimistic than for other types of schizophrenia.<sup>48</sup>

For an individual with paranoid schizophrenia, in the acute phase of the illness, life is terrifying. In *Diagnosis: Schizophrenia*, Genevieve describes the onset of her illness thusly: "I thought people were after me.... I thought my phone was tapped.... The ones spying on me were people I didn't know, but I gave them names.... I started hearing voices saying they were going to kill my father, rape me, kill me."<sup>49</sup> Genevieve was so distraught, she didn't realize she was psychotic.<sup>50</sup> Thomas, also featured in *Diagnosis: Schizophrenia*, describes his symptoms by saying: "... I was having panic attacks. I was very disoriented. I was starting to feel closed in the house. I started to get very depressed. I felt like people were looking at me strangely and saying things about me."<sup>51</sup> Fright and disorientation are commonly reported by people with paranoid schizophrenia, and those sensations frequently coexist in a symbiotic relationship, one exacerbating the other.<sup>52</sup> When the individual in question is in the prodromal phase, they may still feel depressed and confused, as negative symptoms, like apathy and withdrawal, tend to begin before positive symptoms, responsible for making schizophrenia a psychotic disorder, appear.<sup>53</sup> (Negative symptoms are the *absence* of former behaviors, like interactivity or emotionality.<sup>54</sup> Positive symptoms are the *presence* of unusual factors, such as hallucinations or delusions.<sup>55</sup>) One example of prodromal negative symptoms occurs in *Ben Behind His Voices: One Family's Journey from the Chaos of Schizophrenia to Hope*. Randye Kaye describes a heartrending scene in which her seventeen-year-old son, Ben--- just about to be overwhelmed by acute paranoid schizophrenia--- finds a picture of himself taken a year earlier.<sup>56</sup> According to Kaye, "Ben looked at me, his younger self in his eyes, and said 'I forgot how happy I was then.... I really was so happy then. I just can't figure it out.'"<sup>57</sup> This condition of losing the ability to experience joy or pleasure is referred to as anhedonia.<sup>58</sup> After Ben made this realization, he asked his mother, "'Mom, what is *happening* to me?'"<sup>59</sup> Feelings of desperation and confusion mark the lives of many people suffering from paranoid schizophrenia, particularly when they don't realize what precisely they are experiencing.<sup>60</sup>

With the fundamental characteristics of paranoid schizophrenia established, I will commence my film analyses, starting with *The Snake Pit*, directed by Anatole Litvak and starring Olivia de Havilland. *The Snake Pit*, made in 1948, is an interesting look at paranoid schizophrenia because it shows how the illness was treated just about sixty years ago. It portrays how psychiatrists thought paranoid schizophrenia could be cured in a single swoop of Freudian psychoanalysis. According to Hollywood, this highly complex mental illness could be neatly resolved by craftily uncovering a patient's neuroses. Once their unconscious conflicts were exposed, the patient would be free from their mental burden--- perhaps forever.<sup>61</sup>

However, *The Snake Pit* gets many aspects of the disorder right. For example, many people with paranoid schizophrenia experience delusions of grandeur along with delusions of persecution (more commonly called paranoid delusions).<sup>62</sup> For example, Randy Kaye, author of *Ben Behind His Voices*, writes that Ben's delusions of grandeur started to become apparent when he began saying every job was "beneath him," and culminated in his belief God had told him alone the secret of happiness, and now he (Ben) would be able to communicate the secret to the misguided masses through poetry.<sup>63</sup> The protagonist of *The Snake Pit*, Virginia Stuart Cunningham (Olivia de Havilland), has delusions of grandeur in relation to her profession of choice: writing.<sup>64</sup> She believes herself to be a great and prolific writer at points throughout the film, even though she likely doesn't have anything published and hasn't written seriously for a while.<sup>65</sup> In fact, when a nurse hands her a typewriter and tells her to start writing as part of her occupational therapy, Virginia stares blankly at the typewriter as if she doesn't know what to do with it.<sup>66</sup>

While the nature of Virginia's delusions are accurate, one present assumption about them is not. Virginia's psychoanalyst, Dr. Mark Kik (Leo Genn), states when Virginia's delusions are challenged, she is apt to become violent.<sup>67</sup> This is not the case. People who in their prodromal phase were nonviolent will likely remain so in the acute phase of their illness.<sup>68</sup> Inaccurately, when Virginia becomes frustrated and anxious at a small trial designed to decide whether she is ready for release from the hospital, she bites the hand of one of her examiners.<sup>69</sup> Later, when she is talking to her husband (Mark Stevens), she asks him

whether she actually did bite the examiner, or if the incident was merely a story told by her nurses or a false memory.<sup>70</sup> When her husband replies in the affirmative, she laughs a little and says: “But that’s not like me! Biting people...”<sup>71</sup> If biting someone wasn’t like her before her initial psychotic break, it probably wouldn’t be like her in the midst of a psychotic break. Randye Kaye talks about how awful it must be for relatives of people whose delusions do include thoughts of violence.<sup>72</sup> Her son, Ben, was a poet and debater before his illness’ onset, and he continued to tend toward verbal, not physical, confrontation after the onset of his paranoid schizophrenia.<sup>73</sup> Also, in all the studies/patient testimonials in *Diagnosis: Schizophrenia*, there is not a single mention of a patient becoming violent upon hospitalization.<sup>74</sup> Paranoid schizophrenic patients may become emotionally overwrought, screaming or throwing objects, but the book never mentions a patient in any way physically harming their psychiatrists, psychologists, or therapists--- intentionally or not.<sup>75</sup> Dr. Elyn Saks, author of *The Center Cannot Hold: My Journey Through Madness*, also discards this stereotype, saying schizophrenic patients are far more likely to hurt themselves than anyone else.<sup>76</sup>

In *The Snake Pit*, Virginia says she could never love anyone, and she believes another person couldn’t truly love her.<sup>77</sup> This sentiment is explicable when considering the negative and positive symptoms of paranoid schizophrenia. The first part of her statement--- saying she’s incapable of forming a loving relationship--- could be due to flatness of affect, “a reduction or absence of emotional responsiveness.”<sup>78</sup> Flat affect (also called blunt or restricted affect) is one of the most common negative symptoms of schizophrenia.<sup>79</sup> Virginia’s feelings are also attributable to anhedonia, “the inability to experience pleasure.”<sup>80</sup> One can imagine how dreary and sad life could be for a person suffering from paranoid schizophrenia, unable to express their emotions and incapable of feeling pleasurable moods. The second part of Virginia’s statement (believing herself to be unlovable) could be due, at least in part, to the most common schizophrenic delusion--- the delusion of persecution.<sup>81</sup> Individuals experiencing delusions of persecution often feel no one loves them because, as Ben says in *Ben Behind His Voices*, everyone is “against me.”<sup>82</sup> This delusion alienates them from the world even further, making their delusions more

powerful, as there is no way for anyone--- their mother, father, sibling, significant other--- to discredit the delusion if the schizophrenic individual refuses to interact with them.<sup>83</sup>

*The Snake Pit* also accurately depicts the treatments for paranoid schizophrenia used in the 1940s.<sup>84</sup> Virginia undergoes electroconvulsive therapy, hydrotherapy, and psychoanalysis.<sup>85</sup> Electroconvulsive therapy (ECT) is now notorious (partially because of Jack Nicholson's extraordinary performance in *One Flew Over The Cuckoo's Nest*, as the perhaps-sane, perhaps-not Randle Patrick McMurphy, who endures ECT), but it was frequently used to treat schizophrenia.<sup>86</sup> In fact, ECT is occasionally used today in the treatment of severe depression.<sup>87</sup> However, ECT hasn't been shown to have any benefits for individuals suffering from schizophrenia.<sup>88</sup> In *The Snake Pit*, ECT leaves Virginia frightened and even more disoriented than she was before.<sup>89</sup> It doesn't in any way shock the pieces of Virginia's split mind into a more orderly configuration; it just makes matters worse. (Intriguingly, ECT has shown promise as a therapy for individuals with schizoaffective disorder, an illness only a step removed from schizophrenia.<sup>90</sup> This sharp divide---helpful for schizoaffective disorder but not at all for schizophrenia--- is perplexing.) Virginia also is given hydrotherapy, which is terrifying for her because of her intense hallucinations of waterfalls leading into a massive lake of choppy water.<sup>91</sup> Her nurses must maneuver her into the tub and then stretch a strong piece of cloth over the tub's opening to keep Virginia from clambering out in panic.<sup>92</sup> Hydrotherapy isn't a frequently-employed treatment for paranoid schizophrenia anymore, presumably because it was found unhelpful.<sup>93</sup> However, psychoanalysis is a legitimate treatment for schizophrenia in some current clinical psychologists' view.<sup>94</sup> Elyn Saks, the successful Oxford and Yale graduate now working at the University of Southern California as a mental health laws specialist, considers talk therapy crucial to her survival of schizophrenia.<sup>95</sup> Drugs gave her mental clarity, but psychoanalysis gave her a reason to keep living, in her view.<sup>96</sup> At the time of writing her autobiography, *The Center Cannot Hold*, she had regularly seen four psychoanalysts--- Mrs. Jones, Dr. White, Dr. Kaplan, and Dr. Freed (all pseudonyms)--- and thought their psychoanalytic input was responsible for helping her stay out of mental hospitals.<sup>97</sup> Mrs. Jones was a Kleinian psychoanalyst, who

felt the concept of Freudian defense mechanisms distracted from the truth, explaining Elyn's delusions and hallucinations in emotion-oriented terms, without bothering with the defense mechanisms prompting those emotions.<sup>98</sup> Dr. White paid attention to the motivations behind Elyn's psychoticism, telling her she unconsciously defended herself against feelings of powerlessness by believing she could kill people with her mind.<sup>99</sup> Dr. Kaplan functioned as a psychoanalyst, but he was a firm believer in drug therapy as well.<sup>100</sup> He forcefully encouraged Elyn to take medication, and got her to promise that if she tried to wean herself off antipsychotic drugs, she would listen to him unconditionally if he said she needed to begin taking them again. She agreed.<sup>101</sup> Lastly, Dr. Freed was a purist Freudian, believing Elyn could perhaps cease taking medication once the full extent of her neurosis was uncovered through psychoanalysis.<sup>102</sup>

Much psychological research has been done since the filming of *The Snake Pit*, and psychology has made strides in understanding the nature of schizophrenia. Thus, it is understandable that *The Snake Pit* incorrectly depicted some aspects of schizophrenia. Firstly, *The Snake Pit* gives the impression paranoid schizophrenia is developed entirely due to a distressing experience in the patient's childhood, such as a loveless relationship with their mother.<sup>103</sup> Research has shown this is not the case. For years, schizophrenia was blamed on the so-called schizophrenogenic mother--- the "schizophrenia-causing" mother.<sup>104</sup> These women were thought to be domineering, hardhearted, and unresponsive to their child's needs, causing such great psychological trauma schizophrenia was the result.<sup>105</sup> In *The Snake Pit*, Virginia's paranoid schizophrenia is traced back to a childhood conflict, in which her father, whom she adored, "betrayed" her by siding with her mother in an argument.<sup>106</sup> This seemingly innocuous event triggered a downward spiral for Virginia, starting when she smashed a doll representing her father (who died soon after, giving Virginia a Freudian guilt complex), and ending with her inability to form a long-lasting romantic attachment to a man.<sup>107</sup> Her psychotic symptoms were expressions of this inner emotional torment. Schizophrenia isn't this simple. What causes schizophrenia is still unknown, but researchers now think schizophrenia is triggered by a complex combination of social, environmental, and biological/genetic factors--- not a single childhood event.<sup>108</sup>

Also, *The Snake Pit* portrays the disorientation and disorganization frequently accompanying schizophrenia as bouts of localized amnesia, which typically isn't the case.<sup>109</sup> For example, Elyn Saks, writer of *The Center Cannot Hold*, is able to recall her confusion and illogicalness in the midst of psychotic breaks with clarity.<sup>110</sup> Virginia seems to break forth from the fog of psychoticism with no recollection of what occurred during her psychotic episode.<sup>111</sup> Virginia often says "I... I can't remember!" in varying intonations of distress when Dr. Kik, her psychoanalyst, queries her about earlier doings.<sup>112</sup> There are several potential reasons for this oversimplification. One is that Freud's psychodynamic theory was in vogue in 1940s America, and repression of traumatic, unpleasant memories is one of Freud's most notorious concepts.<sup>113</sup> Virginia's episodes of psychoticism could be thought of as her id breaking loose from her ego and superego, revealing her deepest conflicts. Virginia might understand the underlying meaning of her hallucinations and delusions if she were allowed to remember them, so she forgets. The content of her delusions and hallucinations would disturb her, thus her mind denies her access to them when she's thinking clearly. Also, dissociative disorders, especially dissociative amnesia, were the object of popular interest in the 1940s.<sup>114</sup> Hollywood might have simply chosen to ignore reality to capitalize on the symptoms of mental illness most people were curious about. Director Alfred Hitchcock made a film involving generalized amnesia--- *Spellbound*, starring Ingrid Bergman and Gregory Peck.<sup>115</sup> When the onsite advising psychologist mentioned an inaccuracy in the script, Hitchcock said, "My dear, it's only a movie."<sup>116</sup> The makers of *The Snake Pit* might have had a little of the same philosophy operating behind their decision to simplify paranoid schizophrenia.

Also, *The Snake Pit* oversimplifies paranoid schizophrenia by implying it can be cured by Freudian psychoanalysis alone.<sup>117</sup> Dr. Kik uncovers Virginia's past traumas (and comes to the conclusion Virginia has a textbook Electra complex), Virginia cries for a while, and then her recovery is swift. If only managing schizophrenia were so simple.<sup>118</sup> While Elyn Saks credits psychoanalysis with giving her something to live for, she acknowledges her life as it is now, as a professor, wouldn't be possible without antipsychotic drugs.<sup>119</sup> Without treatment which alters her brain's chemistry, relapse would be lurking

behind every corner. It is safe to assume Virginia wouldn't rebound back to her prodromal functioning level after her Electra complex was revealed. Relapse would be likely, and residual symptoms (especially negative ones) are nearly unavoidable without treatment (and sometimes with treatment).<sup>120</sup>

Unfortunately, Virginia wouldn't have access to the best drug available for schizophrenia--- Clozaril.<sup>121</sup>

It's specifically used for people who are resistant to other antipsychotic medications, and Elyn Saks comments "it works, and it works well; there are days now I feel almost guilty for feeling so good."<sup>122</sup>

Clozaril is inconvenient, because the patient taking it is required to have weekly blood tests to check for agranulocytosis---a dangerously low white blood cell count--- but its effects are incredible for many schizophrenic patients.<sup>123</sup>

Lastly, *The Snake Pit* presents paranoid and catatonic schizophrenia as being essentially identical.<sup>124</sup> However, this may be not so much an inaccuracy as a historical note--- as I mentioned earlier, it is now hypothesized other forms of schizophrenia, left untreated, can develop into catatonic schizophrenia.<sup>125</sup> Virginia observes another patient, Hester, who is unresponsive. Her facial expression never alters, and she stands in the same position for hours, until someone touches her or she feels threatened. Then, she lashes out. Virginia thinks Hester's attitudes reflect her own paranoia, commenting she and Hester have essentially the same condition.<sup>126</sup> Catatonia is not a symptom of paranoid schizophrenia, which is why catatonic schizophrenia is its own diagnostic label.<sup>127</sup> (Catatonic symptoms can be created by certain antipsychotic medications, but these advanced medicines wouldn't have been available when *The Snake Pit* took place.)<sup>128</sup> Paranoia can be seen in some catatonic schizophrenics, but only by report after they've begun to recover--- the primary indication of catatonic schizophrenia is the patient is abnormally uncommunicative and unresponsive.<sup>129</sup> Thus, it's difficult to tell what a catatonic schizophrenic individual is thinking or feeling when in the grips of acute schizophrenia.

The second movie I shall discuss, *The Soloist*, is based on actual events.<sup>130</sup> It depicts the life of Nathaniel Ayers (played by Jamie Foxx), a gifted musician who was forced to drop out of Julliard when his paranoid schizophrenia became acute.<sup>131</sup> He was hospitalized and received electroconvulsive therapy,

which did him no good.<sup>132</sup> Eventually, Ayers moved to Los Angeles, looking for his father, but Ayers never found him, and ended up becoming homeless.<sup>133</sup> Steve Lopez (played by Robert Downey Jr.), a Los Angeles Times journalist, heard Ayers playing music on the street near a statue of Beethoven and was intrigued, thinking Ayers would be a good topic for a newspaper article.<sup>134</sup> They developed a rapport, and Lopez eventually began working to get Ayers off the street and into structured music lessons.<sup>135</sup> The movie is heartwarming and inspirational, and features terrific performances from both lead actors.

*The Soloist* gets quite a few things right in its depiction of paranoid schizophrenia. For example, *The Soloist's* portrayal of the gradual onset of schizophrenia is very accurate.<sup>136</sup> (Schizophrenia can have either a gradual or acute onset.)<sup>137</sup> In the film, we see Ayers, as a teenager, withdraw from all social interactions, preferring the company of his musical instruments to his family and friends. His emotions become increasingly unpredictable, and at times inappropriate. (He laughs randomly in the midst of his mother giving him a heartfelt compliment about his blessedness and talent.) As his paranoid schizophrenia becomes more intense, he begins to have hallucinations, seeing a flaming car driving down the street outside his window. He appears troubled by these hallucinations, but he doesn't bring them to anyone's attention or seek professional help. His paranoid schizophrenia reaches its initial apex when he is struck with persecutory delusions, believing his sister is trying to poison him. He forces her to eat the food she brought him (probably because she was understandably worried he was forgetting to eat), and observes her to see if she's suffering the effects of poisoning. Ayers wasn't hospitalized as a result of this episode--- it took a psychotic break in the middle of a rehearsal at Julliard to get extensive professional aid.<sup>138</sup> (This is a commonly observed occurrence in families with a member suffering from schizophrenia-- the family in question may know there is something deeply wrong with that particular family member's mind, but, unless the individual is deemed a danger to himself/herself or others, hospitals and professionals won't take action.)<sup>139</sup>

Also, *The Soloist* clearly shows the spiritual bent many of Ayers' delusions take.<sup>140</sup> This is common in paranoid schizophrenia--- for example, Meredith in *Diagnosis: Schizophrenia* stated: "I

started feeling heartbeats in my stomach, and I thought I was pregnant with Jesus Christ.”<sup>141</sup> As I mentioned earlier, Ben in *Ben Behind His Voices* had spiritually-oriented delusions, believing God was talking to him about the secrets to happiness--- communing with him through a bush.<sup>142</sup> In a letter to his girlfriend, Ben wrote: “I know I will change the world...it is my destiny... Something around showed me the connection that the OM (breath of life) is what the government has blinded people from... and the PRADHANYA... is what I must do... reincarnate the om and show people.”<sup>143</sup> Ayers, in *The Soloist*, shows these types of delusions in a couple ways. Ayers tells Lopez that he, Lopez, is “my god.” Ayers becomes upset when his Christian music teacher impinges on this idea, indignantly asking if his teacher thinks it’s his place to tell him who his god is supposed to be. “I *know* who my god is,” Ayers insists. Ayers later tells an uncomfortable Lopez, “I love God. I love you.” Lopez intently tries to dissuade Ayers from the notion, but Nathaniel Ayers is unswayable. Ayers also refers to the feeling of spiritual connection he feels to people on the street, saying his music is a string which ties all his listeners together and connects them all to him, making his music a deeply transcendent experience. (This is the major reason Ayers is initially averse to living indoors--- he’s afraid he’ll lose the sensation of interconnectedness so fundamental to his life.) Lying on his spot on the sidewalk at night, Nathaniel first recites from the Bible, saying, “Lead us not into temptation. For thine is kingdom, the power and the glory, forever. Forever and ever... I hope you sleep well, Mr. Lopez. I hope the whole world sleeps well...” His feelings of spiritual interconnectedness are a large part of what gives Ayers’ life meaning.<sup>144</sup>

As well as his delusions, Ayers’ hallucinations are convincingly and accurately portrayed.<sup>145</sup> Initially, as depicted in *The Soloist*, Ayers hears voices simply repeating his name, which disorients him, but doesn’t appear to particularly scare him. However, his hallucinations intensify as he grows more psychotic, and he becomes increasingly disturbed by his voices.<sup>146</sup> His auditory hallucinations (the most common sort of hallucination in all varieties of schizophrenia, but a key symptom of paranoid schizophrenia) start taking the form of voices saying such things as: “You’ll never get out...” as Ayers, panicking, babbles, “Hide, hide from the voices!”<sup>147</sup> The voices then say in a resounding chorus, “There’s

no hiding, Nathaniel,” and then, rather inexplicably, “Whiteness... whiteness... whiteness...”<sup>148</sup> Ayers’ delusions and hallucinations reinforce his paranoia--- his hallucinations make the world a terrifying place, making his delusions of persecution far more intense and understandable.

Also, Ayers’ fluent but difficult to understand speech is characteristic of paranoid schizophrenia.<sup>149</sup> Paranoid schizophrenics can often string together ideas logically, but the ideas themselves are unusual, or even bizarre.<sup>150</sup> For example, Randy Kaye comments that her son Ben, after periods of social withdrawal, would open up and babble incessantly about nothing in particular.<sup>151</sup> He’d talk about peculiar topics, but his sentences were comprehensible, not word salad (seemingly random words strung together into a sentence-like structure).<sup>152</sup> For example, Ben accused his mother of trying to hurt him by saying: “I *saw* you, Mom. You can’t deny it. I *saw* the waves going from your hands into my typewriter. I don’t want your negative energy!”<sup>153</sup> The content of his ideas don’t make a great deal of sense, but they are logically organized and expressed. Ayers speaks rapidly and confusingly, but strings together sentences in a typically rational fashion.<sup>154</sup> (This is a reason why paranoid schizophrenics are considered “higher-functioning” than disorganized schizophrenics.<sup>155</sup> Individuals afflicted by paranoid schizophrenia have a better chance at effective communication than those suffering from disorganized schizophrenia, who may start off speaking with a clear idea, but quickly lose track of what they were saying and veer off into another, loosely-associated topic.<sup>156</sup>) Ayers does demonstrate flat vocal affect occasionally, talking continually but with little expression.<sup>157</sup>

Tragically, in real life, an alarmingly high number of schizophrenic individuals end up living on the street. According to the Substance Abuse and Mental Health Services Administration, approximately a quarter of America’s homeless have some form of severe mental illness--- perhaps schizophrenia.<sup>158</sup> Elyn Saks poignantly describes the many homeless people we pass on the street who are muttering to themselves and twitching, and the impulsive revulsion accompanied by such a sight.<sup>159</sup> We rarely feel sympathy for these individuals immediately--- we instead see only their stigma. Glen Grunwald wrote an

article originally featured in the Toronto Star, entitled “My Brother Is Schizophrenic and Homeless,” saying:

In my brother’s case, the viciousness of the disease and the capriciousness it provokes, makes it almost impossible to help him.... I had the same impossible dilemma my family faced over the years: Did I send him money so he could have a roof over his head.... Or try to force him to get the health care he so desperately needs---- but does not want...<sup>160</sup>

This situation is almost identical to the situation Nathaniel Ayers’ sister found herself in in *The Soloist*.<sup>161</sup> These sorts of stories are incredibly sad, and *The Soloist* doesn’t seek to gloss over them--- it exposes them, making them viewers’ food for thought. Are we comfortable living in a society where so many mentally ill people end up not getting the help they need, instead living on the street? Is this neglect a form of abuse to our mentally ill population? *The Soloist* asks these questions and more. In Glen Grunwald’s words: “I see Gary [his brother] in every makeshift bed and inhabited grate. I see him in the hollow eyes of those who hold their hands out for help... I understand why people shy away. It is easier to dehumanize than to deal with the difficult person inside....”<sup>162</sup> These truths are accurately depicted in *The Soloist*.

Lastly, through Ayers’ clothing choices, we can see he possesses a unique sense of self-expression.<sup>163</sup> For example, after meeting Lopez and recommencing music lessons, Ayers was asked to perform at the White House for President Obama in honor of the Americans with Disabilities Act.<sup>164</sup> Ayers wore a white suit and white bowler hat (“‘Because it’s the White House,’” according to one of Lopez’s articles) --- but he added a pair of fingerless gardening gloves.<sup>165</sup> Why? Because he wanted to.<sup>166</sup> At one point in *The Soloist*, Nathaniel inexplicably paints his face mostly white, leaving streaks occasionally.<sup>167</sup> Why did he do this? Because he felt it was the right thing to do at the time.<sup>168</sup> This unique self-expression is often seen in individuals with paranoid schizophrenia--- Elyn Saks made herself a belt out of telephone wire (she was on Yale Law School’s roof at the time).<sup>169</sup> The unusual articles of clothing might have a definite practical purpose (Saks’ belt was intended to be self-protection), or there might be

some sort of superstition associated with it (in *The Soloist*, Ayers hallucinates about whiteness, so perhaps painting his face white has metaphorical implications for him I can't understand).<sup>170</sup> Often, the odd ways paranoid schizophrenics express themselves externally mark individuals with schizophrenia as "different" from the "average" population, contributing to stigma (particularly observable in perceptions of the homeless).<sup>171</sup>

*The Soloist*, perhaps because it isn't depicting a fictional character's life, takes no creative liberties with paranoid schizophrenia, portraying the disorder accurately and empathetically.<sup>172</sup> Ayers' delusions and hallucinations take realistic forms, and the impact his illness has on his friends and family is also touchingly shown.<sup>173</sup> Nathaniel Ayers is still doing reasonably well, living indoors and playing music.<sup>174</sup> He has been honored for helping to decrease the stigma associated with paranoid schizophrenia, and has fairly recently taught himself to play the flute (he was professionally trained as a bass fiddle player, but has since learned to play many instruments, including the cello, trumpet, guitar, and violin).<sup>175</sup>

Next, I'll discuss *Benny and Joon*, a film directed by Jeremiah S. Chechik, starring Mary Stuart Masterson, Aidan Quinn, and Johnny Depp.<sup>176</sup> Unlike *The Soloist*, the accuracy of which is un-impugned by most, *Benny and Joon* is a more controversial film about mental illness. *The Washington Post's* review of this film calls it a "blithe look at mental illness," and it is precisely this light, happy tone many viewers object to.<sup>177</sup> One blogger complains that *Benny and Joon* has "delightful moments," but "fails to realistically address Joon's history or possible outcomes for her future well-being."<sup>178</sup> Despite these perceived flaws, *Benny and Joon* provides an insightful look at the way family members cope with schizophrenic relatives, and the film shows paranoid schizophrenic patients as human beings capable of feelings beyond their psychosis, who can, while adhering to a medication regimen, function adequately in "the real world."<sup>179</sup>

Some argue Joon (Mary Stuart Masterson) is suffering from undifferentiated schizophrenia--- a type where schizophrenic symptoms are clear, but can't be fit into a specific diagnostic label---but I think her symptoms (auditory hallucinations, suspiciousness, her ability to be lucid while acting oddly) point

toward a diagnosis of paranoid schizophrenia.<sup>180</sup> (While Joon's medical records are shown in the movie, what disorder she is suffering from is never revealed.)<sup>181</sup> While hallucinations could indicate any of the forms of schizophrenia, her suspiciousness of the police's, the medics', and her brother's motives suggest paranoid schizophrenia.<sup>182</sup> While her brother Benny (Aidan Quinn) is at work, Joon walks outside with a snorkel on, and starts directing traffic using her Ping-Pong paddle. For obvious reasons, this attracts police attention. When officers arrive, Joon doesn't respond confusedly, dazedly, or apologetically. Instead, she gets defensive. "I have every right to be outside! Every right," she authoritatively tells the police, who then phone Benny.<sup>183</sup> This instant reaction of asserting her independence and assuming her rights are about to be stripped from her is often observed in paranoid schizophrenia.<sup>184</sup> Later on in *Benny and Joon*, Joon has a psychotic episode while she's on a bus with Sam (Johnny Depp), the sweet boy with an unspecified learning disability she's running away from Benny with. Sam has never seen Joon psychotic before. He panics, gets the bus to stop, and the bus driver calls for an ambulance.<sup>185</sup> Joon is definitely hearing voices--- indicative of paranoid schizophrenia.<sup>186</sup> When medics arrive to take Joon to the hospital, she responds passionately and defensively. "You think I don't know who you are?" she contemptuously asks the staff before they begin trying to restrain her. She then shrieks "Don't you touch me!" as Sam, confused and distressed, watches the medics take Joon into the ambulance.<sup>187</sup>

These incidents, while demonstrating Joon's defensive nature and her suspiciousness of people's motives, are not as significant as Joon's interactions with Benny. Benny is undoubtedly overprotective, but his motives are as pure and well-meaning as they could possibly be. He has taken care of his sister, alone, ever since she was a teenager. She is focal point of his life--- he constantly worries about her well-being and goes to inconvenient lengths to facilitate the routines integral to her recovery. Joon's first abnormal reaction occurs when she's playing Ping-Pong with Benny and she suddenly accuses him of trying to cheat. Benny denies it, but Joon sarcastically replies, "Benjamin, don't underestimate the mentally ill. We know how to count." She then loses her temper, shouting, "You're all trying to cheat me! You're trying to cheat!" She throws her Ping-Pong paddle at a lamp, shattering it, and vanishes upstairs.

This shows suspiciousness on a small, relatively insignificant scale, but later in the film, Joon, in the hospital after her psychotic break on the bus, asks Benny, “God, why do you hate me so much?... You need me to be sick.” Here, she attributes all sorts of underhanded motives to her brother, when he was in reality merely overprotective and concerned for his sister. (Sam had been staying at Benny’s house, and, when Joon and Sam reveal their relationship, Benny impulsively kicks Sam out, irritated with him for disrupting Joon’s routine after Benny had specifically told him to leave Joon alone.)<sup>188</sup>

Benny illustrates a phenomenon commonly seen in family of someone with schizophrenia--- a resistance to “farming [their sick relatives] out.”<sup>189</sup> When Joon’s therapist, Dr. Garvey (C.C.H. Pounder), asks Benny how he’s getting along with Joon, he instantly replies, “Fine... normal... fine,” even though they’ve been having difficulties. Dr. Garvey then asks him about placing Joon into a group home for the mentally ill, saying “She’d be with her peers.” “She hates her peers,” Benny laconically replies. He tries to justify his decision to keep Joon at home instead of placing her into professional supportive therapy by saying, “I’m her brother, and I’m her *only* family.” Dr. Garvey provides several positive reasons for placing Joon in a group home: her “agitation” would be kept to a minimum by the professionally-trained staff, she could perhaps recover enough to be able to handle a part-time job, and the group home’s environment would be “supportive and nurturing.” Despite all these pros, Benny still refuses, feeling he alone ought to be responsible for Joon’s well-being.<sup>190</sup> This heightened sense of responsibility is common among family of schizophrenic patients.<sup>191</sup> Randy Kaye, author of *Ben Behind His Voices*, poignantly describes being overwhelmed with guilt when she realized she couldn’t cure Ben’s mental illness--- she couldn’t simply “love him back to normal.”<sup>192</sup> She had to accept she couldn’t provide everything Ben needed.<sup>193</sup> This realization is frequently painful for loving family of a schizophrenic individual.<sup>194</sup>

Near the end of *Benny and Joon*, Joon says she’s tired of people telling her what to do.<sup>195</sup> This is an emotion common among individuals recovering from schizophrenia--- they’re thirsting for independence, but their wary family, trying to keep their ill relative from experiencing stress, sometimes hold them back and are overly controlling.<sup>196</sup> However, one of the most common precursors to relapse is a

patient stopping taking his or her medication, so it is natural for family to want to be involved in their relative's medication schedule.<sup>197</sup> But, they must strike a precarious balance between being too overbearing and allowing their potentially unstable relative too much freedom. In a patient testimonial, a schizophrenic man, David, says: "Friends and family can offer encouragement and practical help, but being pushy can be counterproductive. I am only able to keep up motivation if I'm involved in interests that are my own."<sup>198</sup> Many of the individuals interviewed for *Diagnosis: Schizophrenia* express feelings like Joon's. Joseph says: "Afterward, my parents were very worried; they would watch me, be a little more careful about what they said to me, how they acted around me. Basically, I went back to being a baby for a while.... Inside I knew they were just looking out for my best interests."<sup>199</sup> Similarly, Lucinda says: "...to my face, my family didn't treat me differently. Probably behind my back they did talk about it. I feel that they did see me differently. They kept reminding me of my illness, which did not help me when I was discharged.... I would have preferred my family not to even mention the illness...."<sup>200</sup> Both of these points of view are clearly expressed by Joon, so I feel her reaction to her diagnosis and resulting babying is quite accurate.<sup>201</sup>

Benny is undeniably a hoverer, thus he lays out Joon's schedule for Sam (their new tenant) before he heads to work, telling Sam not to disrupt Joon's routines because they "mean everything to her."<sup>202</sup> I was unaware of this when I first watched *Benny and Joon*, but the formation of routines is extremely important when a person is trying to live a functional life with paranoid schizophrenia.<sup>203</sup> Linda in *Diagnosis: Schizophrenia* encourages individuals recuperating from acute schizophrenia to approach their recovery methodically: "Get up, force yourself into the shower. Do not go back to bed after that alarm rings.... Read a newspaper in the morning. Read a book at night. Watch a movie.... Have a structured routine."<sup>204</sup> Linda sounds like her routine is a necessary evil, but not all schizophrenic individuals feel this way. David comments: "I felt I needed a basic structure around my health.... Otherwise days would go past and I would get lost. This routine became like a discipline. It makes you feel alive."<sup>205</sup> Like Joon, he realizes routine is an essential part of his recovery and finds his schedule comforting.<sup>206</sup>

However, *Benny and Joon* doesn't depict paranoid schizophrenia in a totally correct way. For example (being quite persnickety), Joon's medical records say she was born in June.<sup>207</sup> Statistically, it's more likely for a person with schizophrenia to be born during late winter or early spring.<sup>208</sup> This fact has given fuel to researchers who believe schizophrenia is triggered by a viral infection contracted by a schizophrenic child's mother during her pregnancy.<sup>209</sup> The child might be genetically predisposed to developing schizophrenia (diathesis), and the virus serves as a biological stress, tipping the scales toward schizophrenia.<sup>210</sup> The effects of the viral infection lie dormant until the person in question reaches adolescence or young adulthood, and then the stress inflicted upon them while they were developing fetuses rears its ugly head.<sup>211</sup> Of course, there are schizophrenic individuals not born in winter (just as there are sets of identical twins in which one twin is schizophrenic and the other is not), but if the writers were paying attention to statistical probability, Joon ought to have been born sometime during the winter months.<sup>212</sup>

More seriously, Joon recovers unrealistically quickly from her relapse on the bus with Sam, appearing to be back in a mostly-normal state by the next day.<sup>213</sup> Ben's final hospital stay, as reported in *Ben Behind His Voices*, was fifteen days long, and this was a comparatively brief stay, since doctors already knew what medication worked for him.<sup>214</sup> Surely Joon couldn't become perfectly rational and decide, of her own free will but with the guidance of Dr. Garvey, to move into her own apartment close to Benny's house so soon after a relapse?<sup>215</sup> I doubt in this situation a psychologist would encourage Joon to think about getting her own apartment or let her if she wanted to, since Joon's mental health was clearly fragile. Randye Kaye discusses emergency injections of Haldol, which decreased the severity of Ben's psychoticism quickly, but this intense form of Haldol can't be used constantly because it is so potent.<sup>216</sup> Even if Joon was rapidly stabilized on Haldol, she couldn't continue taking such high doses of it without suffering unpleasant side effects, including muscle cramping and stiffness, uncontrollable tremors, weight gain, dry mouth, and tardive dyskinesia--- a condition which looks a lot like Parkinson's disease.<sup>217</sup> (One of the reasons Elyn Saks stopped taking Navane, a powerful antipsychotic drug, was because she began

experiencing mild symptoms of tardive dyskinesia, such as facial stiffness and sudden uncontrollable twitching.<sup>218</sup>)

However, the point of *Benny and Joon* is not to dwell on alarming aspects of schizophrenia. At its heart, it's a sweet story about family and love. Bad times don't last long, and Joon's unpredictability and Benny's anxiousness don't cloud the sunniness of the film.<sup>219</sup> While some feel (perhaps rightfully) *Benny and Joon* trivializes schizophrenia, I think it contributes something important to discussions of mental illness.<sup>220</sup> Often, we forget sufferers of schizophrenia are human beings, with wishes, hopes, desires, impulses, and goals just like non-schizophrenic individuals. Schizophrenics are defined by more than their illness. They have interests, perhaps in art like Joon or in any other conceivable topic, and like Joon, they have the capacity to fall in love.<sup>221</sup> Van in *Diagnosis: Schizophrenia* states: "... you should realize that it [dating] could help in your recovery because it can make you realize that you have recovered and that you still have the need to be with someone."<sup>222</sup> How often do we think of someone with debilitating mental illness falling in love? Hardly ever, though it does tend to be a part of the human experience. A person without schizophrenia is likely to think, "A schizophrenic person in recovery needs medication, regimentation, and supportive nursing!" whereas a person with schizophrenia who is in recovery is likely to think, "I need a friend," just like any other person. Joon is a person interesting beyond her schizophrenia.<sup>223</sup> I think this is as important as anything else I thought about in the course of researching paranoid schizophrenia.

The last film I shall discuss, *Pi*, has nothing in common with the shiny magic of *Benny and Joon*. *Pi* is an experimental psychological thriller, and was director Darren Aronofsky's directorial debut. *Pi* features a brilliant but disturbed Jewish mathematician, Maximillian Cohen (played by Sean Gullette), who believes there are patterns in everything--- the stock market, the Torah, and nature. *Pi* provides an interesting view of how a person suffering from paranoid schizophrenia sees the world, and also shows how terrifying the onset of schizophrenia can be, especially for a person who is still self-aware enough to realize something is terribly wrong with his or her mind. *Pi* also is a maddening film, because it leaves the

audience unsure what sections of the film are intended to be “reality” and which parts take place entirely within Max’s split mind.<sup>224</sup>

What I found most interesting about *Pi*’s cinematographic style is this: as Max becomes more psychotic, the speed of the film quickens, and sections of shots suddenly vanish. *Pi* is shot almost entirely from Max’s point of view, which draws us into his mind. Because of the cinematography, it is clear Max isn’t seeing the world as a regularly proceeding, linear place as he’s walking along the streets or through a train station. Instead, action quickens, and, as if his thoughts are simply moving too quickly for his brain to keep up with, what should have been a solid line of movement--- a young man walking past him, for example--- registers as fragmented. People appear and disappear too quickly as Max’s uncontrollably racing brain registers them, then skips past onto some new stimulus.<sup>225</sup> This disjointed but uncomfortably intense perception of reality is common among people suffering from paranoid schizophrenia.<sup>226</sup> The resultant sensations are disorienting.<sup>227</sup>

Of all the aforementioned paranoid schizophrenic individuals, Max in *Pi* shows the greatest discomfort being around people. He defends his social withdrawal by describing himself as “very private.”<sup>228</sup> If he weren’t experiencing hallucinations and delusions, one might suppose he had a severe case of social anxiety disorder, not paranoid schizophrenia.<sup>229</sup> Max often becomes extremely aware of everyone on the street staring at him--- whether they are actually looking at him is a matter for debate. When arranging a pick-up for a coveted computer piece with shady business associates, before any other stipulation Max says, “I don’t want to talk to anybody--- I’m a very private person.”<sup>230</sup> Max has a complex lock on his door, featuring a peephole so he can immediately see who is outside. Near the end of the film, when Max is clearly unbalanced, he even refuses to open his door to Jenna, a young girl in his apartment building who shows a lively interest in math, and who Max seems to like. Max avoids interacting with his cute next door neighbor, Devi, who sometimes drops by his apartment with food for him (perhaps because everyone in his building other than Jenna can clearly see Max is not alright). Max recoils when Devi touches him, exclaiming, “What are you doing? What are you *doing*?”<sup>231</sup> This

uneasiness about physical contact is indicative of paranoid schizophrenia.<sup>232</sup> For example, Randye Kaye mentions her son Ben becoming spontaneously uncomfortable with hugging and casual touching, even though he had been a clingy younger boy.<sup>233</sup> This social anxiety prefaces social withdrawal, a primary symptom of the prodromal phase of paranoid schizophrenia.<sup>234</sup>

The first hallucination Max experiences during *Pi* is dramatic. He's at a coffee shop, intently ignoring the perky Hasidic Jew, Lenny, who is later going to persuade Max to lend his considerable mental abilities to decoding mathematical messages in the Torah. Max's hands suddenly start shaking uncontrollably. Clearly, this means something important to Max, as he leaves immediately. He goes to his apartment, takes medicine for his migraines and injects himself with an unspecified medication, murmuring "Please--- may this be a small one."<sup>235</sup> The surrounding world begins to appear a little foggy and static-filled. Max, rubbing his temples, begins to panic. He turns off the lights to try to lessen the intensity of his migraine (Max always has black fabric stretched across his windows to keep out natural light), but is paralyzed with terror as he hallucinates the door to his apartment (which, as I mentioned before, is well-barricaded), shaking as the door knob twists back and forth and the locks strain. The door bursts open, and the screen is filled with whiteness. Max faints. When he comes to, he's cowering underneath his bathroom's sink.<sup>236</sup> This sort of frightening hallucination is prevalent among sufferers of paranoid schizophrenia.<sup>237</sup> For example, Genevieve in *Diagnosis: Schizophrenia* says, "While I was working I started to have symptoms. I thought people were after me and I was being followed."<sup>238</sup> Max experiences similar feelings (delusions initially, but perhaps not by the end of *Pi*, when some of his worst fears are seemingly being realized), which translates into the sort of hallucinations he experiences.<sup>239</sup>

Depending on how you interpret *Pi*, Max may be suffering from delusions of grandeur.<sup>240</sup> There is one person Max is genuinely close to--- Sol, one of his past teachers. Max regularly goes to Sol's apartment to play the complex board game Go, and talk about math and science. Max appears to like Sol, but he disregards Sol's opinion when Sol expresses worry Max is "losing it."<sup>241</sup> Max just begins talking animatedly about his mathematical theories, speculating about an underlying pattern in the stock market,

since the market is a living “organism” like any other.<sup>242</sup> He also mentions his preoccupation with finding the word of God in the Torah through math. Sol sharply says, “This is insanity, Max!” to which Max quickly replies, “Or maybe it’s genius!”<sup>243</sup> Max believes himself to be a genius, which he finds motivating, yet troubling.<sup>244</sup> He is extremely intelligent, so perhaps this belief isn’t as delusional as it appears. However, Max later expresses the belief he is the “chosen one,” which, depending on how much of the film you interpret as “real” and how much as hallucination, could also definitely be indicative of a delusion of grandeur.<sup>245</sup>

Max may also be experiencing somatic hallucinations by *Pi*’s conclusion.<sup>246</sup> When a person experiences a somatic hallucination, “the misperception is centered at or on the body’s organs.”<sup>247</sup> As mentioned previously, Max has horrible headaches, and after injecting himself with an unnamed medication for migraines, either a vein starts to abnormally bulge in his temple, a scar has formed, or he is hallucinating a scar as an appropriate marker for the place where his headaches originate. The scar is long and jagged--- an odd shape for an injection scar, which tend to be small and circular. Thus, it is safe to assume Max’s hallucinations have intensified to include somatic hallucinations.<sup>248</sup> Somatic hallucinations aren’t typical of paranoid schizophrenia, but they are observed in a small subset of cases.<sup>249</sup>

Max’s paranoid schizophrenia is especially complicated since it is linked to several other physical symptoms. For example, before every migraine, his hands start to tremble uncontrollably. After each psychotic break (usually accompanied by a migraine) he experiences a nosebleed.<sup>250</sup> Nosebleeds can be linked to hypertension, a condition connected to schizophrenia.<sup>251</sup> Elevated levels of norepinephrine often contribute to high blood pressure, and:

...a number of these studies [studies done testing the correlation between high blood pressure and schizophrenia] support the hypothesis, and several suggest that elevated NE [noradrenergic] signaling plays a particularly prominent role in the paranoid subtype of schizophrenia.<sup>252</sup>

So, hypertension is likelier to occur in paranoid schizophrenics than in individuals afflicted by other types of schizophrenia.<sup>253</sup> Then, hypertension is also tied to headaches, which may be why Max suffers all three--- nosebleeds, debilitating headaches, and bouts of active psychoticism brought on by paranoid schizophrenia.<sup>254</sup> Actually, many people who suffer from paranoid schizophrenia also experience intense headaches. For example, James in *Diagnosis: Schizophrenia* comments: “One other symptom I had was I used to get a lot of headaches and I was thirsty all the time.”<sup>255</sup> At one point in *Pi*, Max gives a list of all the medications (for both high blood pressure and migraines) he has tried which brought no relief.<sup>256</sup> Among the remedies he mentions are: Tenormin (which can cause disorientation and confusion), Percodan (which can cause lightheadedness and sensations associated with anxiety), and Sansert (a drug now discontinued in America as it can trigger dissociation and hallucinations).<sup>257</sup> Max is no longer on these medications when the film commences, so his hallucinations and disorientation continues without them.<sup>258</sup> But all these medications could exacerbate Max’s positive paranoid schizophrenic symptoms, making him more unbalanced.<sup>259</sup>

All these films treat paranoid schizophrenia in interesting and diverse ways. *The Snake Pit*’s overly optimistic ending must be tempered with realism; few paranoid schizophrenics simply waltz out of the hospital completely cured.<sup>260</sup> *The Soloist* presents the most realistic view of paranoid schizophrenia, presenting it as a disease which tragically strikes young people just as their highest aspirations come into focus, but as an illness which can be handled.<sup>261</sup> More importantly, Nathaniel Ayers isn’t portrayed as either a tortured, unpredictable danger or a saintly man brought low by illness. He is shown as a man the equal of Steve Lopez, with his own personality, his own virtues, and his own faults. Ayers’ life is treated with dignity and respect.<sup>262</sup> Mental illness has a constant presence in *Benny and Joon*, but the sadness associated with paranoid schizophrenia is never allowed to fully make itself known. Instead, *Benny and Joon* touchingly portrays the mending of familial relationships after the onset of a debilitating mental illness. It also depicts the tentative way a young woman recovering from acute paranoid schizophrenia resumes her day-to-day life.<sup>263</sup> At its core, *Benny and Joon* is a love story--- which some think trivializes

the severity of mental illness, but I think helps recognize the humanity inherent in each sufferer of schizophrenia.<sup>264</sup> Finally, *Pi* shows a man struggling to cope with and understand his illness, attempting to comprehend a world he can no longer control. Max is a compelling hero, and as the audience is drawn into his mind, we gain an appreciation for how terrifying paranoid schizophrenia must be.<sup>265</sup> All of these films present paranoid schizophrenia as a challenge and a sadness, but not as a death sentence. Each presents a deeply human character, not someone defined by their mental illness. While paranoid schizophrenia is often misrepresented, there are clearly places in the media we can look for accurate, perceptive depictions of this illness.

## Bibliography

- Pi*. Directed by Darren Aronofsky. Released July 10, 1998. Santa Monica, California: Artisan Entertainment, January 12, 1999. DVD, 84 minutes.
- Baxendale, Sallie. "Memories aren't made of this: amnesia at the movies." *BMJ*. December 18, 2004. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC535990/>
- Benny and Joon*. Directed by Jeremiah S. Chechik. Released April 16, 1993. Beverly Hills, California: Metro-Goldwyn-Meyer, January 9, 2011. DVD, 98 minutes.
- Fitzgerald, Paul J. "Is elevated norepinephrine an etiological factor in some cases of epilepsy?" *Seizure* 19 (July 2010): 311-318.
- Ford-Martin, Paula and Teresa G. Odle and Angela M. Costello. "An Overview of Schizophrenia." In *Schizophrenia: Perspectives on Diseases & Disorders*. Edited by Jacqueline Langwith. Detroit: Greenhaven Press, 2011.
- Grunwald, Glen. "My Brother Is Schizophrenic and Homeless." In *Schizophrenia, Perspectives on Diseases & Disorders*. Edited by Jacqueline Langwith. Detroit: Greenhaven Press, 2011.
- Harkey, Kathy. "Schizophrenia Stole My Son." In *Schizophrenia: Perspectives On Diseases & Disorders*. Edited by Jacqueline Langwith. Detroit: Greenhaven Press, 2011.
- Daniel Harmon. *Schizophrenia: Losing Touch with Reality*. Edited by Carol C. Nadelson. Philadelphia: Chelsea House, 2000.
- Spellbound*. Directed by Alfred Hitchcock. Released December 28, 1945. New York: Selznick International Pictures, October 14, 2008. DVD, 101 minutes.

Kaye, Randy. *Ben Behind His Voices: One Family's Journey from the Chaos of Schizophrenia to Hope*.

Plymouth, U.K.: Rowman & Littlefield Publishers, Inc, 2011.

Review of the film *Benny and Joon* by Rita Kempley. "Benny and Joon." *Washington Post*. April 16, 1993.

*The Snake Pit*. Directed by Anatole Litvak. Released November 4, 1948. Los Angeles, California:

Twentieth Century Fox Film Corporation, June 1, 2004. DVD, 108 minutes.

Lopez, Steve. "Serenade in the key of glee: Steve Lopez takes Nathaniel Anthony Ayers to San Francisco, where he is honored for helping to decrease the stigma of mental illness." *Los Angeles Times*.

July 12, 2009. [latimes.com/news/local/la-me-lopez12-2009jul12,0,4746090.column](http://latimes.com/news/local/la-me-lopez12-2009jul12,0,4746090.column)

Lopez, Steve. "'Hello, Nathaniel': Obama welcomes Mr. Ayers to D.C." *Los Angeles Times*. July 28,

2010. <http://articles.latimes.com/print/2010/jul/28/local/la-me-0728-lopez-column-20100728>

Mason, Susan E., and Rachel Miller. *Diagnosis: Schizophrenia: A Comprehensive Resource for Patients,*

*Families, and Helping Professionals*. New York: Columbia University Press, 2002.

McGilligan, Patrick. *Alfred Hitchcock: A Life in Darkness and Light*. New York City: IT Books, 2010.

Percodan: "Oxycodone/Aspirin (By mouth)," *PubMed Health*. Accessed February 25, 2014.

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0009135/?report=details>

Saks, Elyn. *The Center Cannot Hold: My Journey Through Madness*. New York: Hyperion,

2007.

Sansert: "Sansert Side Effects." *Drugs.com*. Accessed February 25, 2014.

<http://www.drugs.com/sfx/sansert-side-effects.html>.

Sloan, Jennifer. "The genes for schizophrenia appear to be scattered on many human chromosomes. Why is this?" National Human Genome Research Institute. *2006 National DNA Day Online Chatroom Transcript*.

<http://www.genome.gov/DNA Day/q.cfm?aid=6035&year=2006>

Tenormin: "Atenolol," *PubMed Health*. Accessed February 25, 2014.

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0009135/?report=details>

Tibbetts, Carleen. "Disabilities Week: The Patronizingly 'Adorable' Side of Schizophrenia in 'Benny & Joon.'" July 23, 2013. <http://www.btchflocks.com/2013/07/disabilities-week-the-patronizingly-adorable-side-of-schizophrenia-in-benny-joon.html#.UwPAFRB5OKI>

Tsuang, Ming T., Stephen V. Faraone, and Stephen J. Glatt. *Schizophrenia: The Facts*. 3<sup>rd</sup>. ed. New York: Oxford University Press, 2011.

Walker, Peter. "Schizophrenia and a Daily Routine." *InShape News Mind Matters*. Accessed 2/22/14.

<http://inshapenewsflash.com/mind-matters/schizophrenia-and-a-daily-routine/>

*The Soloist*. Directed by Joe Wright. Released April 24, 2009. Universal City, California: DreamWorks Pictures & Universal Pictures, August 4, 2009. DVD, 109 minutes.

## Citations

1. Rachel Miller and Susan E. Mason, *Diagnosis: Schizophrenia: A Comprehensive Resource for Patients, Families, and Helping Professionals* (New York: Columbia University Press, 2002), 60.
2. *The Snake Pit*, directed by Anton Litvak (November 4, 1948; Los Angeles, CA: Twentieth Century Fox, 2004), DVD.
3. *The Soloist*, directed by Joe Wright (April 24, 2009; Universal City, CA: DreamWorks Pictures & Universal Pictures, 2009), DVD.
4. *Benny and Joon*, directed by Jeremiah S. Chechik (April 16, 1993; Beverley Hills, CA: Metro-Golden-Mayer Studios Inc., 2011), DVD.
5. *Pi*, directed by Darren Aronofsky (July 10, 1998; Santa Monica, CA: Artisan Entertainment, 2013), DVD.
6. Paula Ford-Martin, Teresa G. Odle, and Angela M. Costello, "An Overview of Schizophrenia," in *Perspectives on Diseases & Disorders: Schizophrenia*, ed. Jacqueline Langwith (Detroit: Greenhaven Press, 2011), 16.
7. *Ibid.*, 16.
8. *Ibid.*, 16.
9. Ming T. Tsuang, Stephen V. Faraone, and Stephen J. Glatt, *Schizophrenia: The Facts*, 3<sup>rd</sup> ed. (Oxford, New York: Oxford University Press, 2011), 35, 47, 63.
10. *Ibid.*, 84.
11. *Ibid.*, 35.
12. *Ibid.*, 35.
13. *Ibid.*, 35.
14. *Ibid.*, 67.
15. *Ibid.*, 67, 112.
16. Jennifer Sloan, "The genes for schizophrenia appear to be scattered on many human chromosomes. Why is this?" National Human Genome Research Institute, 2006 National DNA Day Online Chatroom Transcript (April 2006):  
<http://www.genome.gov/DNADay/q.cfm?aid=6035&year=2006>

17. Ibid., 57-58.
18. Randy Kaye, *Ben Behind His Voices: One Family's Journey from the Chaos of Schizophrenia to Hope* (Plymouth, United Kingdom: Rowman & Littlefield Publishers Inc., 2011), 17.
19. Tsuang, Faraone, and Glatt, *Schizophrenia*, 46.
20. Ibid., 46.
21. Rachel Miller and Susan E. Mason, *Diagnosis: Schizophrenia: A Comprehensive Resource for Patients, Families, and Helping Professionals* (New York: Columbia University Press, 2002), 20.
22. Tsuang, Faraone, and Glatt, *Schizophrenia*, 63.
23. Ibid., 63.
24. Ibid., 63.
25. Ibid., 63.
26. Ibid., 74-75.
27. Ibid., 76.
28. Ibid., 76.
29. Ibid., 76.
30. Daniel Harmon, *Schizophrenia: Losing Touch with Reality*, (Philadelphia: Chelsea House Publishers, 2000), 42.
31. Tsuang, Faraone, and Glatt, *Schizophrenia*, 63.
32. Ibid., 78.
33. Ibid., 78.
34. Ibid., 78.
35. Ibid., 78.
36. Ibid., 78.
37. Ibid., 78.
38. Ibid., 78.
39. Ibid., 79.
40. Ibid., 15-17, 19.
41. Harmon, *Schizophrenia*, 34, 37.
42. Tsuang, Faraone, and Glatt, *Schizophrenia*, 16.

43. Ibid., 16.
44. Ibid., 15.
45. Ibid., 15.
46. Ibid., 15.
47. Ibid., 15.
48. Ibid., 15.
49. Miller and Mason, *Diagnosis: Schizophrenia*, 5-6.
50. Ibid., 6.
51. Ibid., 13.
52. Ibid., 6-7.
53. Kaye, *Ben Behind His Voices*, 34-35.
54. Ford-Martin, Odle, and Costello, "An Overview of Schizophrenia," *Schizophrenia*, ed. Jacqueline Langwith, 23-24.
55. Ibid., 23.
56. Kaye, *Ben Behind His Voices*, 37.
57. Ibid., 37.
58. Tsuang, Faraone, and Glatt, *Schizophrenia*, 12.
59. Kaye, *Ben Behind His Voices*, 27.
60. Miller and Mason, *Diagnosis: Schizophrenia*, 43.
61. *The Snake Pit*.
62. Tsuang, Faraone, and Glatt, *Schizophrenia*, 15.
63. Kaye, *Ben Behind His Voices*, 47, 125-126.
64. *The Snake Pit*.
65. Ibid.
66. Ibid.
67. Ibid.
68. Kaye, *Ben Behind His Voices*, p. 146, 284.
69. *The Snake Pit*.
70. Ibid.
71. Ibid.
72. Kaye, *Ben Behind His Voices*, p. 146-148.

73. Ibid., 146.
74. Miller and Mason, *Diagnosis: Schizophrenia*, 5-17.
75. Ibid., 1-171.
76. Elyn Saks, *The Center Cannot Hold: My Journey Through Madness* (New York: Hyperion, 2007), 330-331.
77. *The Snake Pit*.
78. Tsuang, Faraone, and Glatt, *Schizophrenia*, 12.
79. Ibid., 12.
80. Ibid., 12.
81. Harmon, *Schizophrenia*, 37.
82. Kaye, *Ben Behind His Voices*, 19.
83. Ibid., 127.
84. *The Snake Pit*.
85. Ibid.
86. Daniel Harmon, *Schizophrenia*, 69.
87. Tsuang, Faraone, and Glatt, *Schizophrenia*, 95.
88. Ibid., 95.
89. *The Snake Pit*.
90. Tsuang, Faraone, and Glatt, *Schizophrenia*, 107.
91. *The Snake Pit*.
92. Ibid.
93. Hydrotherapy isn't mentioned in any of my reference materials, hence my assumption.
94. Saks, *The Center Cannot Hold*, 86-87.
95. Ibid., 331. 339.
96. Ibid., 331.
97. Ibid., 87, 188, 243, 324.
98. Ibid., 90, 188.
99. Ibid., 188.
100. Ibid., 243.
101. Ibid., 318.
102. Ibid., 325.

103. *The Snake Pit*.
104. Tsuang, Faraone, and Glatt, *Schizophrenia*, 49.
105. *Ibid.*, 49.
106. *The Snake Pit*.
107. *Ibid.*
108. Miller and Mason, *Diagnosis: Schizophrenia*, 20.
109. *The Snake Pit*.
110. Saks, *The Center Cannot Hold*, 136-139.
111. *The Snake Pit*.
112. *Ibid.*
113. Saks, *The Center Cannot Hold*, 89.
114. Sallie Baxendale, "Memories aren't made of this: amnesia at the movies," *BMJ* (December 18, 2004), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC535990/>
115. *Spellbound*, directed by Alfred Hitchcock (1945, New York: Selznick International Pictures, October 14, 2008), DVD.
116. Patrick McGilligan, *Alfred Hitchcock: A Life in Darkness and Light* (New York City: IT Books, 2010), 85.
117. *The Snake Pit*.
118. *Ibid.*
119. Saks, *The Center Cannot Hold*, 331.
120. Miller and Mason, *Diagnosis: Schizophrenia*, 99.
121. Kaye, *Ben Behind His Voices*, 195.
122. Saks, *The Center Cannot Hold*, 325.
123. Kaye, *Ben Behind His Voices*, 195.
124. *The Snake Pit*.
125. Tsuang, Faraone, and Glatt, *Schizophrenia*, 12.
126. *The Snake Pit*.
127. Tsuang, Faraone, and Glatt, *Schizophrenia*, 15-16.
128. Kaye, *Ben Behind His Voices*, 191-194.
129. Tsuang, Faraone, and Glatt, *Schizophrenia*, 16.

130. *The Soloist* and Steve Lopez, "Nathaniel Ayers plays the Foshay Learning Center: A love of music brings Nathaniel Ayers out to the Foshay Learning Center to perform with kindred spirits," *Los Angeles Times*, June 15, 2011, [latimes.com/news/local/la-me-0615-lopez-foshaymusic-20110614,0,6644424.column](http://latimes.com/news/local/la-me-0615-lopez-foshaymusic-20110614,0,6644424.column)
131. Lopez, "Nathaniel Ayers plays the Foshay Learning Center."
132. *The Soloist*.
133. Ibid.
134. Ibid.
135. Ibid.
136. Ibid.
137. Harmon, *Schizophrenia*, 44.
138. *The Soloist*.
139. Kathy Harkey, Schizophrenia Stole My Son, *Schizophrenia*, ed. Jacqueline Langwith, 110.
140. *The Soloist*.
141. Miller and Mason, *Diagnosis: Schizophrenia*, 10.
142. Kaye, *Ben Behind His Voices*, 126.
143. Ibid., 73.
144. *The Soloist*.
145. Ibid.
146. Ibid.
147. Ibid., and Tsuang, Faraone, and Glatt, *Schizophrenia*, 15.
148. *The Soloist*.
149. Saks, *The Center Cannot Hold*, 129.
150. Ibid., 92.
151. Kaye, *Ben Behind His Voices*, 137.
152. Ibid., 138.
153. Ibid., 158.
154. *The Soloist*.
155. Ford-Martin, Odle, and Costello, "An Overview of Schizophrenia," *Schizophrenia*, ed. Jacqueline Langwith, 18.
156. Ibid., 18.

157. *The Soloist*.
158. Gary Grunwald, "My Brother is Schizophrenic and Homeless," *Schizophrenia*, ed. Jacqueline Langwith, 121.
159. Saks, *The Center Cannot Hold*, 264.
160. Grunwald, "My Brother is Schizophrenic and Homeless," *Schizophrenia*, ed. Langwith, 120.
161. *The Soloist*.
162. Grunwald, "My Brother is Schizophrenic and Homeless," *Schizophrenia*, ed. Langwith, 122.
163. *The Soloist*.
164. Steve Lopez, "'Hello, Nathaniel': Obama welcomes Mr. Ayers to D.C.," *Los Angeles Times*, July 28, 2010, <http://articles.latimes.com/print/2010/jul/28/local/la-me-0728-lopez-column-20100728>
165. Ibid.
166. Ibid.
167. *The Soloist*.
168. Ibid.
169. Saks, *The Center Cannot Hold*, 139.
170. Ibid., 139, and *The Soloist*.
171. Grunwald, "My Brother is Homeless and Schizophrenic," *Schizophrenia*, ed. Langwith, 120.
172. *The Soloist*.
173. Ibid.
174. Lopez, "Nathaniel Ayers plays the Foshay Learning Center," *Los Angeles Times*.
175. Ibid.
176. *Benny and Joon*.
177. Rita Kempley, "Benny and Joon," *Washington Post*, April 16, 1993, [http://www.washingtonpost.com/wp-srv/style/longterm/movies/videos/bennyjoonpgkempley\\_a0a373.htm](http://www.washingtonpost.com/wp-srv/style/longterm/movies/videos/bennyjoonpgkempley_a0a373.htm)
178. Carleen Tibbets, "Disabilities Week: The Patronizingly 'Adorable' Side of Schizophrenia in 'Benny & Joon,'" n.d.

179. *Benny and Joon*.
180. Tsuang, Faraone, and Glatt, *Schizophrenia*, 15-16.
181. *Benny and Joon*.
182. Ibid., and Kaye, *Ben Behind His Voices*, 80.
183. *Benny and Joon*.
184. Kaye, *Ben Behind His Voices*, 80, 88.
185. *Benny and Joon*.
186. Tsuang, Faraone, and Glatt, *Schizophrenia*, 15.
187. *Benny and Joon*.
188. Ibid.
189. Ibid.
190. Ibid.
191. Miller and Mason, *Diagnosis: Schizophrenia*, 131-132.
192. Kaye, *Ben Behind His Voices*, 100.
193. Ibid., 100.
194. Ibid., 95.
195. *Benny and Joon*.
196. Miller and Mason, *Diagnosis: Schizophrenia*, 133.
197. Kaye, *Ben Behind His Voices*, 256.
198. Peter Walker, "Schizophrenia and a Daily Routine," *InShape News Mind Matters*, <http://inshapenewsflash.com/mind-matters/schizophrenia-and-a-daily-routine/>
199. Miller and Mason, *Diagnosis: Schizophrenia*, 132.
200. Ibid., 132.
201. *Benny and Joon*.
202. Ibid.
203. Miller and Mason, *Diagnosis: Schizophrenia*, 92-93.
204. Ibid., 92.
205. Walker, "Schizophrenia and a Daily Routine."
206. Ibid., and *Benny and Joon*.
207. *Benny and Joon*.

208. Tsuang, Faraone, and Glatt, *Schizophrenia*, 59.
209. Ibid., 59.
210. Ibid., 59.
211. Ibid., 59.
212. Ibid., 59, and *Benny and Joon*.
213. *Benny and Joon*.
214. Kaye, *Ben Behind His Voices*, 261.
215. *Benny and Joon*.
216. Kaye, *Ben Behind His Voices*, 178.
217. Tsuang, Faraone, and Glatt, *Schizophrenia*, 92.
218. Saks, *The Center Cannot Hold*, 264, 303.
219. *Benny and Joon*.
220. Tibbets, "Disabilities Week: The Patronizingly 'Adorable' Side of Schizophrenia in '*Benny & Joon*.'"
221. *Benny and Joon*.
222. Miller and Mason, *Diagnosis: Schizophrenia*, 89.
223. *Benny and Joon*.
224. *Pi*.
225. Ibid.
226. Miller and Mason, *Diagnosis: Schizophrenia*, 6, 29.
227. Ibid., 29.
228. *Pi*.
229. Ibid., and Tsuang, Faraone, and Glatt, *Schizophrenia*, 121.
230. *Pi*.
231. Ibid.
232. Kaye, *Ben Behind His Voices*, 128.
233. Ibid., 125.
234. Ibid., 35.
235. *Pi*.
236. Ibid.

237. Miller and Mason, *Diagnosis: Schizophrenia*, 7-8.
238. Ibid., 5.
239. *Pi*.
240. Ibid., and Tsuang, Faraone, and Glatt, *Schizophrenia*, 8.
241. *Pi*.
242. Ibid.
243. Ibid.
244. Ibid.
245. Ibid., and Miller and Tsuang, Faraone, and Glatt, *Schizophrenia*, 8.
246. *Pi*.
247. Tsuang, Faraone, and Glatt, *Schizophrenia*, 6.
248. Darren Aronofsky, *Pi*.
249. Tsuang, Faraone, and Glatt, *Schizophrenia*, 15.
250. *Pi*.
251. Paul J. Fitzgerald, "Is elevated norepinephrine an etiological factor in some cases of epilepsy?" *Seizure*, 19 (2010): 311-318.
252. Ibid.
253. Ibid.
254. Ibid., and *Pi*.
255. Miller and Mason, *Diagnosis: Schizophrenia*, 7.
256. *Pi*.
257. Tenormin: "Atenolol," PubMed Health, <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0009135/?report=details>, Percodan: "Oxycodone/Aspirin (By mouth), PubMed Health, <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMHT0009135/?report=details>, Sansert: "Sansert Side Effects," <http://www.drugs.com/sfx/sansert-side-effects.html>.
258. *Pi*.
259. Miller and Mason, *Diagnosis: Schizophrenia*, 76.
260. *The Snake Pit* and Saks, *The Center Cannot Hold*, 334.
261. *The Soloist* and Harmon, *Schizophrenia*, 24.
262. *The Soloist*.

263. *Benny and Joon*, and Miller and Mason, *Diagnosis: Schizophrenia*, p. 85, 88.

264. *Benny and Joon*, and Tibbets, "Disabilities Week: The Patronizingly 'Adorable' Side of Schizophrenia in '*Benny & Joon*.'"

265. *Pi*.