



Miller, G. (2022) 'Science fiction without gadgets' and the normalization of cognitive impairment: Reassessing Charly (1968). *Science Fiction Film and Television*, 15(2), pp. 145-168. (doi: [10.3828/sftv.2022.13](https://doi.org/10.3828/sftv.2022.13)).

This is the author's final accepted version.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<http://eprints.gla.ac.uk/265899/>

Deposited on: 01 March 2022

Enlighten – Research publications by members of the University of Glasgow
<http://eprints.gla.ac.uk>

‘Science fiction without gadgets’ and the normalization of cognitive impairment: Reassessing *Charly* (1968)

In 1968, ABC Pictures released *Charly* (Nelson 2001), directed by Ralph Nelson, and starring Cliff Robertson as Charly¹ Gordon, a cognitively impaired bakery worker who agrees to undergo the first human trial of an experimental intelligence-enhancing neurosurgical procedure. The movie was commercially successful, but critical reception was mixed. Robertson’s performance was highly praised, and he was awarded the 1969 Academy Award for Best Actor in a Leading Role. But despite Robertson’s skillful transition in performance from cognitively impaired adult to superhuman genius, reviewers were unimpressed by the motion picture’s sentimentalism and apparently gimmicky direction, including its use of split-screen and multiple panels.

Charly has received very little academic analysis, despite (or perhaps because of) the canonical status of the text from which it was adapted, the 1959 short story, ‘Flowers for Algernon’, first published in *Fantasy and Science Fiction*, and authored by Daniel Keyes (1927–2014). The short story and the later novel based upon it have had extraordinary critical and commercial success, with the novel receiving additional circulation and exposure over the decades as a pedagogical text, particularly in the USA. Keyes’s 2014 obituary in *The New York Times* states that the later novel version sold over five million copies and became ‘a staple of English classes’ (Slotnik 2014). Ableism may also be an explanatory factor in the movie’s oversight by scholars. As Allan and Cheyne argue, there is a ‘long history of SF scholarship not seeing disability’ (Allan and Cheyne 2020, 388) even though ‘[h]owever we define science fiction, whatever medium or subgenre or flavour of SF one favours, disability is absolutely central to the formation and ongoing growth of the genre’ (Allan and Cheyne 2020, 390). *Charly*’s genre features may further explain its marginal position within science fiction cinema studies. The story offers only a single novum-premise (neurosurgical cognitive enhancement) and is set within a broadly naturalistic late-1960s Boston. The *mise-en-scène* is sparsely populated with extrapolations of the supposed technoscientific future, with none of the bustling techno-futurism of cinematic genres such as space opera and dystopia – even the neurosurgery itself is only briefly represented. Nor does the downbeat ending offer the transhumanist gratification of later movies of cognitive enhancement such as *Limitless* (2011) or *Lucy* (2014). The story and style, moreover, cross into various other genres, including and most obviously popular romance – a genre typically neglected by science fiction critics.

Yet, whatever the reasons for academic oversight of *Charly*, the movie deserves serious scrutiny and a degree of positive re-evaluation. It is a landmark in science fiction cinema’s representation of persons with disabilities, offering sustained engagement with the contemporaneous emergent discourse and practice of ‘normalization’, which sought to remove cognitively impaired persons from institutions and to find normative roles for them in the wider community. Although the story apparently promotes technoscientific ‘cure’ of cognitive impairment, the movie is in fact far more plural, equivocal, and nuanced in its treatment of the novum-premise. Charly’s cognitive enhancement is a novum which opens the narrative to social and cultural critiques offered by proponents of normalization. The movie enacts normalization by including cognitively impaired children in the cast (to the discomfort of contemporaneous critics). It also endorses normalization through the device of a cognitively impaired person who becomes able to recognize and articulate the stereotyped, degrading roles afford to this marginalized group. On the other hand, the movie also explores the cultural and societal limits of the normalizing agenda, particularly with respect to the

¹ I will use ‘Charly’ to refer to the movie character specifically (following the spelling given in the credits of the movie), and ‘Charlie’ for the character in and across other media, adaptations, and versions.

sexuality of cognitively impaired persons, but also in terms of their normalized status as a new supply of low-paid labor within a competitive capitalist society. Moreover, *Charly*'s peculiar mix of cinematic devices, codes and genres attempts an aesthetic complementary to the social revolution of normalization. The split screen devices complement the screenplay's presentation of the self-identity of the cognitively impaired as formed by interaction with available social roles and responses. Moreover, *Charly* is a 'heteroscopic' film, analogous to the heteroglossic novel identified by M.M. Bakhtin (Bakhtin 1981): by displacing any single 'neutral' style, the movie uses a plurality of cinematic styles to convey the sense of a cultural struggle among competing codes that might represent the action of the story.

Sources, versions, and receptions

Flowers for Algernon (hereafter, *Flowers*) has a complex history of versions and adaptations (Nicholls and Clements 2021), even in the English language alone. The original text is a lengthy 1959 short story (in Keyes's terminology, a 'novelette' (Keyes 2004, 102)) first published in *The Magazine of Fantasy and Science Fiction*. This version received the 1960 Hugo Award for Short Fiction. The story was then adapted into a 60-minute CBS television movie, *The Two Worlds of Charlie Gordon*, broadcast live in 1961, and starring Cliff Robertson. The TV adaptation was nominated for an Emmy, and Robertson was so impressed by the story's potential that he bought the theatrical motion picture rights (Keyes 2004, 111–112). Adaptation of the story for cinema proceeded under Robertson, with screenwriting firstly assigned to William Goldman and then to Stirling Silliphant (Keyes 2004, 130–131) – who had recently won an Academy Award for Best Adapted Screenplay with *In the Heat of the Night* (1967, dir. Norman Jewison), and would also win a Golden Globe for his adaptation of *Flowers* ("Dialogue on Film: Stirling Silliphant" 1988). In parallel, and independently of the 1968 movie adaptation, Keyes worked on his novelistic development of the story, which was published in 1966 by Harcourt to favorable reviews in leading outlets such as *The New York Times* (Keyes 2004, 143–144), and to great commercial as well as critical success.

Charly, the cinematic adaptation, begins with opening credits over scenes of the suit-clad protagonist playing alongside children in a playground. Various scenes ensue which elaborate Charly's life and aspirations in his hometown of Boston. Charly, dressed in denims and leather jacket, wanders a local university campus amid the buzz of student conversation on learned topics. He aspires to better himself at night classes, but works in a local bakery, where he is the target of crude workplace pranks. Scenes of psychological laboratory testing reveal the expert view on Charly, including an IQ in the range 59–70 in various dimensions, and round out his relationship with his night-school teacher, Alice Kinnian (Claire Bloom). The latter, a PhD student, has identified Charly as a potential human subject for an intelligence enhancing therapy pioneered at a local university clinic. The therapy has been used already upon Algernon the mouse, whose stunning gains in intelligence (measured by maze-solving ability) prompt the lead scientists, Nemur (Leon Janney) and Straus (Lilia Skala), to seek out an experimental human subject. Charly's desire to learn marks him out as a desirable candidate, and Alice helps to secure his consent to the procedure. Although postsurgical results take a while to manifest, Charly soon acquires a superhuman level of intelligence which outstrips that of the team at the Nemur–Straus Clinic. He falls in love with Alice, who repels his violent, coercive advances. This prompts a short period of breakdown (distinguished by florid use of multiple panels), followed by reconciliation and romance with Alice, compressed into a montage of love movie clichés. Their relationship is cut short. Shortly before his exhibition at a scientific congress, Charly discovers Algernon is dead – the therapy's effects are short-lived, and lead to an eventual decline in intelligence (and, it seems,

premature death). He breaks off his relationship with Alice, and the movie ends with the declining Charly playing among the children at his favorite local playground – the scene is in fact that depicted in the opening credits, now revealed as a prolepsis of Charly's end.

The dominant popular critical view has been that *Charly* pales in comparison to the parallel novel and the original short story. This evaluation is certainly shared by the contemporaneous *New York Times* review (Canby 1968), which concludes that *Charly* is inferior to the 'very moving and very sad' novel – even if the reviewer hasn't personally read Keyes's text. The review identifies apparent problems with the screen adaptation and its direction, though not with Robertson's 'earnest performance'. Firstly, the story suffers from the funneling of the delicate source material of intellectual disability into a Hollywood romance narrative: the movie 'exploit[s] mental retardation for – if not the fun – the bittersweet romance of it'. *Charly* has no satisfactory generic abode, a characteristic which the review identifies as a defect: the movie is like trying to make 'a comedy about cancer'; it's 'science fiction without gadgets, a horror film without thrills'. The city setting is obtrusive: 'there seems to have been a compulsion to use as much of the geography [of Boston] as possible for its own sake'. The impression of pointless, gratuitous elaboration is intensified by the misuse of split-screen and multiple panels: 'The effect is gaudiness without particular purpose or cohesion of style'. *Charly* is a movie that is 'out of synchronization with its apparent sentimental aim'.

This article does not aim to rigorously track the adaptation from short story to film, nor to offer Keyes's novel as the model to which the movie should have aspired. (Indeed, the novel wasn't the source text: Robertson had bought only the short story rights, and the screenwriters were working largely independently of Keyes.) Nonetheless, some comparison usefully indicates differences that arise because of medium and genre. Keyes has greater elbow room in the novel to offer further subplots (Charlie has various romantic and sexual entanglements), to show more of Charlie's life at the bakery, and to explore extensively Charlie's biographical history and family life. The movie also omits the closing 'descent' of the short story and novel, so that we see nothing of Charlie's life as he drops below average intelligence (with an early death as his implied fate). This last change irked Keyes, who states that 'Charlie's tragic fall should have been shown' (Keyes 2004, 156), even if Robertson's plan for an upbeat ending had not made it to the final edit. (Apparently, Robertson preferred the downbeat ending of the short story, but thought that the movie adaptation would require at least a glimmer of hope via Algernon's return to life (Keyes 2004, 127, 129–130, 152–153).) The movie also finds different ways to solve the problem of communicating Charly's changing intelligence. The textual versions address this problem by using first-person narration to convey Charlie's rapidly developing competence in written English – literacy furnishes a metonymy for intelligence. Although there are occasional scenes of Charly's naïve spelling, the movie largely uses other means to communicate cognitive impairment and then increasing intelligence. Costume, for instance, plays an important role. Charly progresses from denims to sports jacket to three-piece suit, and his choice of clothing also hints at his inner idea of himself: the waistcoat he affects while still working at the bakery, for instance, indicates his desire to be recognized as intelligent.

The psychological burden of the expanded narrative also differs dramatically between novel and movie. *Flowers for Algernon* offers intelligence enhancement as its (sole) novum. This device allows the prose narrative not merely to open a dialogue on the ethics and desirability of 'curing' the cognitively impaired, but also to explore and authorize a life-narrative template of psychoanalytic enlightenment. In Keyes's novel, Charlie receives some psychoanalytic psychotherapy from the clinic team, but also, and more importantly, undertakes a process of self-directed therapeutic anamnesis in which he returns to, and works

through, various traumatic childhood experiences (Miller 2020, 112–119).² The movie, though, with its separate route of adaptation via Robertson, Goldman, and Silliphant, almost entirely sidesteps this potential discourse. It concentrates instead upon Charly's troubled quest for dignity, recognition, self-determination and sexual fulfilment within his Boston community.

Historical and cultural context

Charly was released towards the end of a decade in which the USA had very publicly pursued the equivalent of a medical and social-scientific moonshot for persons with cognitive impairment. In a 1962 article for *The Saturday Evening Post*, Eunice Kennedy Shriver – sibling to President John F. Kennedy – announced ‘Hope for Retarded Children’, revealing that her sister Rosemary was ‘mentally retarded’ (Kennedy Shriver 1962, 71). Her article declared the Kennedy family's financial support for basic research on the causes of cognitive impairment, and it explored modes of community living that would offer an alternative to state institutions, particularly for the ‘75 to 85 percent of the retarded [who] are capable of becoming useful citizens with the help of special education and rehabilitation’ (Kennedy Shriver 1962, 72). *Charly* clearly draws upon this changed public consciousness of a dawning future whereby persons with cognitive impairment were understood through new medical, psychological and sociological expertise.

As James W. Trent explains, the 1960s were thus a decade in which the Kennedy administration propelled an academic, institutional, and cultural re-evaluation of the nature, management, and standing of cognitively impaired persons: ‘The coming of Camelot to Washington in 1961 kindled the aspirations of many Americans. Advocates of services for mentally retarded citizens were no exception. Shortly after assuming his new office, Kennedy appointed a presidential panel on mental retardation’ (Trent 2017, 234). This was an issue about which the Kennedys were personally concerned, given Rosemary Kennedy's difficulties. Admittedly, they drew a veil over the lobotomy to which they had subjected Rosemary, and which seems merely to have worsened her mild learning difficulties, so much so that she had to be permanently institutionalized (Trent 2017, 237–238). Nonetheless, private motives aside, the Kennedys used their foundation, and their political capital, to directly address the phenomenon of ‘mental retardation’. After the panel's report, Congress acted in 1963:

New legislation ensured that funding for mental retardation would come out of the National Institute on Child Health and Human Development (NICHD) created in the previous Congress and administered by the National Institute of Health, not by NIMH [National Institute of Mental Health]. Established to provide research and training funds, the NICHD projected in its very name the direction set by a new breed of researchers groomed on Kennedy Foundation support and committed to the Kennedy interest in scientific research. (Trent 2017, 238)

This political program drew together the worlds of politics, science, celebrity, and Hollywood. Trent records a Kennedy Foundation awards dinner in 1962 that included political heavyweights such as Adlai Stevenson and Kennedy himself, alongside university researchers who had made breakthrough discoveries, the actor and singer Judy Garland, and

² Keyes himself underwent a twice-weekly training analysis from 1950 to c.1953 (Keyes 2004, 52, 81), while enrolled in a postgraduate course on the ‘organismic approach’ to psychopathology (Keyes 2004, 53), taught by its originator, the psychiatrist Kurt Goldstein (1878–1965). Keyes, while ambivalent about the therapeutic benefits of analysis, came to see it as a technique with which to improve his creative writing, even if not as a profession which he could pursue while working as a writer (Keyes 2004, 50–51).

previews from John Cassavetes's 1963 movie, *A Child is Waiting* – which included among its cast ‘young people with intellectual disabilities from a segregated and custodial institution, the Pacific State Hospital in Pomona’ (McCaffrey 2019, 42).

The identification of cognitive impairment as a condition open to potential biomedical prevention and alleviation was also accompanied by changing social and cultural attitudes. The 1960s was the dawning era of ‘normalization’ in human services for persons with cognitive impairment: ‘First imported in the mid-1960s from Scandinavia by Gunnar and Rosemary Dybwad through their work with the International League of Societies for the Mentally Handicapped, normalization was elevated to a principle in 1972 in Wolf Wolfensberger's influential book, *The Principle of Normalization in Human Services*’ (Trent 2017, 249–250). For his North American audience, Wolfensberger defined ‘normalization’ of so-called ‘deviant persons’ as ‘[u]tilization of means which are as culturally normative as possible, in order to establish and/or maintain personal behaviors and characteristics which are as culturally normative as possible’ (Wolfensberger 1972, 28). While this principle might appear to focus upon actions that reformed the individual (for example, by teaching someone not only to walk but ‘to walk with a normal gait’ (Wolfensberger 1972, 33)), normalization was also – at least in theory – a matter of changed societal and cultural interpretation of ‘deviant persons’ by the majority, who should ‘work for greater acceptance of differentness’ of many kinds, including skin colour, religion, appearance, physical and sensory disability, sex and sexuality, and, of course, intelligence (Wolfensberger 1972, 41). Wolfensberger's principle of normalization and its practice undoubtedly had flaws, particularly in light of later social models of disability. Normalization tended to an emphasis on the disabled person ‘fitting in’ with hegemonic ‘normality’; it tended to homogenize the experience of disabled people; and it was oriented toward a functionalist model of professional authority over disabled persons, which concealed asymmetrical power dynamics and conflicts of interest (Oliver and Barnes 2012). Nonetheless, normalization articulated a radical shift toward enabling persons with cognitive impairment to have a life as close to normal as possible, rather than being spatially and socially segregated in institutions.

Keyes's biography anticipates the period in which persons with intellectual disabilities were deinstitutionalized in order (it was hoped) to make way for their normalization. As an educator in the 1950s, he taught classes in ‘Special Modified English for low I.Q. students’ where he encountered a student who inspired the character of Charlie Gordon (Keyes 2004, 89). In the early 1960s, he toured ‘a state facility for what is now referred to as the *developmentally challenged*’ as part of his research for the novel of *Flowers* (Keyes 2004, 121) – with his notes providing the basis for a lightly fictionalized account of the institution which Charlie visits as he confronts the reality of his declining intelligence. Moreover, the textual and cinematic versions of *Flowers* became pedagogical instruments with which to modify the way cognitively impaired persons were understood by school students (thus, an element of ‘interpretation’ within social systems, to use Wolfensberger's vocabulary (Wolfensberger 1972, ch. 4)). The 1960s saw the beginning of the story's entry into the US school curriculum. Keyes records that ‘*Scholastic Magazine* ... had published the “Flowers for Algernon” novelette version several times, in 1961, 1963, 1964, 1965, and 1967’ (Keyes 2004, 153). Upon the release of *Charly*, Bantam ‘sponsor[ed] a series of preview screenings for educators in key cities where the movie was to be shown’ (Keyes 2004, 153), accompanied by ‘a kit containing a copy of the paperback novel, a study guide for teaching it, and an interview between Ralph Nelson, the film's producer/director, and Stirling Silliphant, the screenwriter’ (Keyes 2004, 154). According to Keyes, ‘more than 25,000 English teachers and their families saw the movie and received free copies of the novel’ (Keyes 2004, 5), implicating both *Flowers* and *Charly* within the processes of normalization.

***Charly* and the normalizing representation of cognitive impairment**

The novum of intelligence-enhancing neurosurgery in *Charly* may seem to hinder its pretensions towards public education about the capacities of the cognitively impaired. The narrative presents Charly's low IQ as an impairment to be technologically alleviated, and it dwells on Charly's consequently enriched life, and the pathos of his eventual decline and possible death. It may seem that *Charly* simply yields to the generic temptation offered by science fiction: as Kathryn Allan explains, 'the idea of curing the body of its infirmities is a powerful trope repeated throughout the entire history of the SF genre' (Allan 2013, 9). Nonetheless, as Allan notes, by extrapolating a supposed cure, science fiction can offer 'a more expansive and critical consideration of *how* the cure narrative is performing in that text. In other words, what does it mean to cure the disabled body, what are the cure's outcomes, and are they desirable?' (Allan 2013, 9). In indicating the complexities of narratives of cure, Allan draws upon the pathfinding work of David T. Mitchell and Sharon L. Snyder, who argue that stories of disability are a kind of 'narrative prosthesis' – like a literal prosthesis, the 'narrative issues to resolve or correct ... a deviance marked as improper to a social context' (Mitchell and Snyder 2000, 53). But narrative prosthesis need not promote cure, nor cure alone. While 'repair of deviance may involve an obliteration of the difference through a "cure"', it may also offer 'the rescue of the despised object from social censure, the extermination of the deviant as a purification of the social body, or the revaluation of an alternative mode of being' (Mitchell and Snyder 2000, 53–54). While cure may be the dominant trope in science fiction, the 'repair of deviance' that it offers can be far more complex, plural, and equivocal than mere endorsement of supposed biomedical progress towards the elimination of bodily and mental impairment.

In *Flowers*, the narrative interrogates Charlie's supposed cure (in his case, of mind or brain) and enhancement. This skepticism is emphasized by Keyes's decision in the novel to specify Charlie's disability as caused by PKU (Phenylketonuria) – a condition which was by the 1960s firmly identified as detectable and preventable in newborns (for further discussion, see Miller 2020, 113–114), and which increased expectations that other forms of cognitive impairment could be prevented or treated. Even as the novel celebrates Charlie's enhanced intelligence and growing emotional maturity, it asks whether such public health campaigns are motivated by essentially eugenic motives to eliminate supposedly inferior individuals (Miller 2020, 114). In parallel, despite the valorization of intelligence in *Charly*, the motion picture does much to undermine this apparent textual dominant. Most obviously, the narrative and psychological continuity between pre- and post-op Charly affirms common human rights and dignity between different levels of cognitive ability. Post-op Charly is able to speak for pre-op Charly with a full understanding of the various humiliations heaped upon his earlier self. This device reinforces the ethical point that disrespect for cognitively impaired persons is neither diminished nor negated by their lesser ability to comprehend and articulate such mistreatment. The message is elaborated in a scene shortly after Charly has learned of his pending cognitive decline. He visits a jazz bar, where a cognitively impaired glass collector drops a tray of drinking glasses to the amusement and mockery of the clientele. Charly responds by patiently assisting the young man in picking up the glasses. For anyone who misses this didactic content, earlier dialogue between post-op Charly and Alice offers reinforcement. The former remarks: 'I was wondering why people who would never dream of laughing at a blind or crippled man would laugh at a moron'. This dialogue occurs as Charly wanders the Freedom Trail with Alice, allowing the movie to suggest that the social revolution of normalization is as desirable and necessary to the US as its own earlier

transition to independence from Britain. Boston's statue of Paul Revere looms in the background, emphasizing the significance of individual and collective self-determination within the climate of normalization (c.f. Wolfensberger 1972, ch. 13).

Charly also conveys normalization by casting cognitively impaired children and using their school as a location for filming, implicating the process of filmmaking within agendas of inclusion and participation. The scene occurs as Straus encourages Alice to deepen her emotional and potentially sexual intimacy with post-op Charly, insisting that he has 'made a transference' and 'is completely dependent' upon her. The location is presumably intended to represent the clinical wing of the Nemur–Straus Clinic around Hallowe'en time, though it is quite probably the real-life 'Saint Coletta School for Exceptional Children' acknowledged in the closing credits (presumably a branch close to Boston). Bloom and Skala perform while improvising with cognitively impaired children who are engaged in finger-painting. The children are entrusted with simple interactions and dialogue (giving up a seat to Alice at Straus's request, showing off drawings, a closing chorus of 'goodbye Miss Kinnian', and so on). The scene's semi-documentary, neorealist feel is enhanced by the probable location filming and by the naïve performances of the children – one girl, for instance, seated next to Bloom and clearly in frame, looks directly at the camera, returning the viewer's gaze.

Though participation of performers with disabilities in the film-making process may appeal to our present sensibilities, *Charly* was undoubtedly challenging to its contemporaneous audience, who dwelled less on participation and visibility of disabled persons, and more on the potential for public display and mockery of the cognitively impaired. The reviewer for *Monthly Film Bulletin* regarded the inclusion of 'real retarded children' as a 'fatal mistake' since it nudged Robertson's performance toward imitative mockery – 'After this, his comic grimaces seem rather distasteful' (Milne 1968, 192). The 'grimaces' the reviewer has in mind occur early in the film as pre-op Charly undergoes psychological testing at the clinic, with Alice administering the questions, while the team film him through a one-way mirror. During the tests, Charly makes faces towards the mirror (and the team), crossing his eyes and shoving his tongue behind his lips. Admittedly, Robertson's performance seems, at times, to work by invoking crude stereotypes of facial demeanor. Howard Sklar remarks that 'even though Robertson's performance is sensitive and compelling, I found disturbing the loose-lipped expression adopted by the actor in the scenes in which Charly is meant to seem intellectually disabled' (Sklar 2013, 57). Sklar regards this as an echo of the novel, which at points offers such stock elements in 'the stereotypical representation of people with intellectual disabilities' (Sklar 2013, 57).

Robertson's performance of stereotypical representations in *Charly* is, I argue, more subtle. Admittedly, there are further obvious or stereotypical elements, such as Robertson's decision to frequently use his non-dominant hand to convey pre-op Charly's dyspraxia (attentive viewers will note that Charly's surgery also makes him right-handed). The movie might seem complicit with the cinematic 'cloak of incompetence' identified by Ann-Marie Callus, whereby stereotypical signifiers such as dyspraxia or unfashionable dress and appearance focus attention on the cognitively impaired individual, thereby distracting viewers from the disabling socio-cultural environment (Callus 2019). Yet Robertson conveys that Charly, while genuinely cognitively impaired, also plays the role of a cognitively impaired person. Wolfensberger argued that cognitively impaired persons were in fact imprisoned within societal interpretations, which offered them roles such as (among others) 'menace', 'object of pity', 'holy innocent', 'object of ridicule' and 'eternal child' (Wolfensberger 1972, 12–25):

Generally, people will play the roles they have been assigned. This permits those who define social roles to make self-fulfilling prophecies by predicting that someone cast into a certain role will emit behaviour consistent with that role.

Unfortunately, role-appropriate behaviour will then often be interpreted to be a person's 'natural' mode of acting, rather than a mode elicited by environmental events and circumstances. (Wolfensberger 1972, 16)

Robertson's gurning at the experimenters conveys Charly's rudimentary sense that he is performing a role for others – a role which he also wishes to refuse, given his 'passing' as a college student (or professor) in the opening scenes. The point is again emphasized in a scene which follows Charly on what is revealed to be his regular Sunday bus tour of Boston's cultural and academic geography ('See you next Sunday, Charly' calls the driver, as he makes a special stop in Charly's working-class neighborhood). Charly, clad in jacket and tie, initially appears with a smiling face, crinkled eyes, and absolutely no trace of the half-open mouth. Similar elements of identity and interaction, of performance within performance, also appear in Charly's humiliation by his supposed friends at the bakery. One prank involves Charly being directed to open his locker, which has been prepared with a pail of fermenting dough that spills out over him. As the nature of this prank dawns on Charly, he enthusiastically joins in with his co-workers' laughter, and smears his head with the dough to enhance his status as the bakery's village idiot. He thereby deliberately (if unwisely) assumes the role of 'object of ridicule' – as Wolfensberger himself explicitly notes in a brief comment on the movie (Wolfensberger 1972, 23).

Charly at the limits of normalization

Yet the normalizing aesthetic of *Charly* encounters stubborn obstacles which become apparent as the screenplay struggles with the complexity of the contemporaneous movement that was being given its compelling North American articulation by Wolfensberger. While one might aspire to shape 'cultural values, attitudes, and stereotypes so as to elicit maximal feasible cultural acceptance of differences' (Wolfensberger 1972, 32), such materials have their own refractory properties. For all its sensitivity to the complexities of cognitive impairment. *Charly*, partly because of longstanding anxieties about the sexuality of cognitively impaired persons, implies that they are effectively the souls of children imprisoned in the bodies of adults – what Wolfensberger describes as the 'eternal child role perception' (Wolfensberger 1972, 24). This was part of the rhetoric employed by Kennedy Shriver in her *Saturday Evening Post* article, where, in order to rescue the 'mentally retarded' from social censure, she suggested that '[t]hey often strike people as odd in their behavior because the mind of a small child inhabits the body of a much older person' (Kennedy Shriver 1962, 74). The continuation of this mythology in the motion picture was noted by the *Monthly Film Bulletin* reviewer who observes that Charly's 'determinedly tumbledown hovel' and 'child's blackboard and chair' make 'an instant subliminal appeal to the audience's motherly instincts' (Milne 1968, 191). The motion picture drives home this comparison in various ways, particularly in Charly's fondness for his local playground, to which he returns at key points in the narrative – including the opening and closing scene.

Exploiting the sanctified status of the postwar US child might have seemed a canny persuasive device. This was essentially the tactic employed in Guy Green's *Light in the Piazza* (1962) (based on Elizabeth Spencer's 1960 novella (Spencer 1960)), which shows a cognitively impaired female protagonist in her mid-twenties finding sexual and romantic love in Florence, without losing her disability. Clara (Yvette Mimieux), we learn from her mother's dialogue, 'has the mental age of a child of 10' after being kicked in the head by a Shetland pony when she was a young girl. The result is 'a little girl who never grows up'. For this movie, a mental age of ten in an adult woman means the soul and personality of a ten-year-old stuck within an adult body. The cinematic result is both 'eternal child' and 'holy

innocent' (Wolfensberger 1972, 21–22): Clara's *joie de vivre*, candor, and naive perceptions spiritually regenerate those whom she meets (the movie ends with her munching on rose petals strewn at her wedding, and her husband then joining in). In this respect, the character of Clara anticipates later performances of intellectual disability in which childlike naivety and asexuality mark the character as innately incompetent rather than socially disabled (Callus 2019). Indeed, the mystery of Clara's sexuality is never resolved. The character of a ten-year-old girl in the body of Yvette Mimieux in a pink bikini is clearly sexualized by the camera's gaze, but Clara's capacity to understand and consent to sexual relations with her husband is a narrative (and legal) mystery – let alone off-stage questions such as pregnancy and childbearing.

What may escape notice in the exoticized midsummer revelry of a romantic comedy set in Florence cannot easily transfer to *Charly*, where the myth of a child in a grown-up body obscures with far less success the touchy subject of the cognitively impaired adult male's sexual life. The *Film Quarterly* reviewer comments acidly that '[t]he operation apparently perks up his [Charly's] gonads too' (Hunt 1969). Indeed, almost immediately after the operation is proven a success, the camera becomes complicit with the protagonist's newly discovered male gaze, offering various zooms and point-of-view shots on the 'whole new world' revealed to him by Alice's body. By implication, the pre-op Charly is cognitively impaired, thus a child, and thereby entirely asexual. Keyes's novel works circuitously around this problem by presenting Charlie as sexually repressed by a series of incidents, including a traumatic childhood rejection by his sweetheart, and his mother's shaming of his burgeoning sexuality, all of which leads to an enduring Freudian castration anxiety (Miller 2020, 116–118). The motion picture however doesn't deign to explain its rhetorical castration of the pre-op Charly – his apparent sexual latency soothes anxieties about the sexuality of cognitively impaired persons, and perhaps men specifically, living in the community. This persuasive and figurative tactic continues earlier and outmoded medical practices such as literal castration and sterilization in the management of cognitively impaired persons during the era of institutionalization (Trent 2017, 296; Keely 2004, 208) – a period when 'urban reformers often feared developmentally disabled men as potential sexual predators' (Keely 2004, 207).

This anxiety is glimpsed when Silliphant's screenplay briefly and problematically presents the maturing post-op Charly within the 'social menace' role (Wolfensberger 1972, 20). When the post-op Charly embarks on his ill-fated play for Alice's affections, the soundtrack plays commentary from Straus – 'Charly Gordon is still a child emotionally' – while the camera follows a first-person perspective of Charly closing in on Alice's apartment door (a shot viewpoint conventionally familiar from crime thrillers as that of the anonymous attacker, the criminal whose identity is concealed until revealed by detection). The scene that ensues disturbs Keyes, since when 'Charlie forces his attention on Alice', the action 'violates his character', rather than being continuous with his gentle pre-op self (Keyes 2004, 155). In the uncomfortable scene that follows, Charly attempts to win Alice away from her fiancée, presenting her with the gift of an antique hand-mirror. Alice declines his advances, but Charly persists. He grabs her and tries to kiss her, and a struggle between the two ensues in what is quite clearly an attempted rape or sexual assault. Alice delivers a karate chop to Charly's neck (dubbed as a traditional Hollywood slap, almost as if to soften the scene's violence), and exclaims: 'You think anyone would ever want you!? – you stupid moron!'. The movie discourages the 'object of ridicule' role but finds itself at a loss to represent Charly's sexuality, which is either elided (the eternal child) or presented as an uncontrolled danger (the menacing moron).

In attempting to interpret Charly's sexuality, the movie indirectly gestures towards the dearth of cultural materials for such positive re-interpretation. *Charly* also deals, perhaps more successfully, with further limits to the normalizing program's aspiration to re-interpret

human difference. Pre-op Charly is indeed superficially normalized: he holds down a paid job at the bakery, lodges in the community with a landlady, and – at least initially – his only sustained contact with caring professionals comes through his voluntary attendance at Alice’s night classes for adult learners. But Charly is also smart enough to know the limits placed upon his life by his comparatively low intelligence. Not only does he belong to the bakery’s community only insofar as he is an object of ridicule, he is also at the bottom of the socio-economic heap as an unskilled manual laborer (for Charly, normalization means poverty). The cultural and economic limits to normalization are further revealed during his selection for neurosurgery. In order to vet Charly’s suitability for the experimental therapy, Alice asks about his motives in seeking education. His replies show that he desires greater intelligence in order to form relationships, particularly at work, where he can’t understand the conversations of his co-workers – he wants to ‘get a little closer, you know’. During his first encounter with Algernon, Charly is also the only one to be concerned that the mouse will starve unless it completes the maze-solving test. Alice reassures him that the mouse ‘won’t go hungry’; unlike the experimenters, the working-class South Bostonian may know what it means to go without a square meal.

However, Charly’s relational needs and class position are entirely forgotten when he is inducted into the competitive regimen of psychometric testing: the repeated tests don’t merely measure Charly; this combined power-knowledge also shapes him according to the demands of competitive individualism. After being defeated by Algernon in the maze test, pre-op Charly, who is unaware that Algernon is enhanced, laments to Alice the humiliation of being ‘dumber than a mouse’. Later, the immediately post-op Charly is back in his garret room, where Algernon has been left by the clinic team. After picking up and reading in frustration from a *Dick and Jane* reader (which clearly presents a hollow ideal of community participation), Charly exclaims, ‘My name is Charly Gordon and I live in a room and I got no sister and no dog and I am *stupid!*’. Spotting Algernon in his cage, he expostulates: ‘And what are *you* doin’ *here?* ... Well, I ain’t gonna race you’ (ellipsis/pause in original). Yet race Algernon he will. Through his involvement with the clinic team, Charly is socialized to value intelligence not as a means to relationship with others but rather as a means to competitive victory over them. Algernon transforms from pet to rival. When the post-op Charly’s intelligence begins to obviously manifest, he successfully repeats the simultaneous maze tests with Algernon, and wins. He exclaims, ‘I beat ya’, before running through the streets from his boarding house to the Nemur–Straus Clinic, declaring ‘I beat him’, ‘I creamed him’. From this point onward, Charly is no longer the butt of jokes at the bakery; he is instead a dangerous competitor who outshines even skilled operatives (and later joins the professional classes as a top-notch research scientist). *Charly* thereby questions our societal and cultural valorization of intelligence (which of course extends to the norms of science fiction itself) – probing at the authenticity of changed interpretations of the cognitively impaired in a society run on principles of competitive individualism.

***Charly* and visual heteroglossia**

Charly was dogged by the accusation that its departures from workaday Hollywood realism were mere gimmickry, hence *Monthly Film Bulletin*’s reference to ‘Ralph Nelson’s irritatingly pointless use of split-screen techniques’ (Milne 1968). What such statements overlook are the potential connections between the film’s overall aesthetic and both its subject matter (the self-formation of a cognitively impaired person) and historical context (of normalization). Nelson’s use of split-screen and multiple panels offers evidence for a more charitable interpretation. Split-screen printing had been often used in scenes such as

telephone calls, where shot-reverse-shot of both speakers would otherwise involve a disorienting cut from location to location. Split-screen had thus been in the service of transparency, rather than opposed to it. But there was growing recognition of other potentials in the technique. For instance, the Expo 67 fair in Montreal had extensively showcased both multiple panel and multiple screen cinema. A contemporaneous reviewer remarks: ‘one experience with multi-vision is enough to convince a viewer that he has encountered the future form of many films’ (Shatnoff 1967, 11); she praises the technique because ‘[i]t involves a viewer in-depth. He has to stretch imaginatively, to juggle and resolve impressions on multiple levels, conscious, unconscious, intellectual, emotional. Viewing is a challenge’ (Shatnoff 1967, 3).

Rather than merely use panels to show simultaneous action across different locations, *Charly* frequently uses multiple panels to present simultaneously both speech (or action) and response – thereby obviating the familiar shot-reverse-shot procedure for cutting between characters. Reaction shots can thus occur simultaneously with the action to which they respond. For instance, the post-op Charly displays his new-found intelligence at the bakery when his co-worker Gimpy (Skipper McNally) offers Charly the use of a complex piece of machinery – which the latter masters after a single explanation. The scene at first cuts to reaction shots of Charly’s co-workers, and then – as if having set up the meaning of the technique – the image splits to dual simultaneous slow-zoom shots of Charly and of Gimpy’s dumbfounded reaction. A similar technique is used during dialogue between Straus and Alice during their scene together with cognitively impaired child actors: we see Alice’s denial (both verbal, and presumably psychoanalytic given her later relationship with Charly) as Straus attempts to hint to Alice that the latter has romantic feelings for her former student.

In the context of *Charly*, split-screen can therefore emphasize the intersubjective relationship between self and other, whereby one finds, or does not find, one’s own self-image reflected back. This is a concern continuous with the screenplay’s implicitly interactionist view of the self-identity of the cognitively impaired as always in dialogue with available social roles, be they stigmatizing or normalizing. Rather than the Freudian self of the novel, the movie foregrounds an interactionist tradition inaugurated in the US by Charles Horton Cooley’s conception of ‘the reflected or looking-glass self’ (Cooley 1983, 184) in *Human Nature and the Social Order* (1902):

As we see our face, figure, and dress in the glass, and are interested in them because they are ours, and pleased or otherwise with them according as they do or do not answer to what we should like them to be; so in imagination we perceive in another’s mind some thought of our appearance, manners, aims, deeds, character, friends, and so on, and are variously affected by it. (Cooley 1983, 184)

This model of a ‘looking-glass’ self which finds recognition from others is elaborated within the action and symbolism of the film. The narrative arc is essentially of Charly’s quest to overcome the division between his inner aspiration to be intelligent, and his perception by others as merely stupid (the village idiot of the bakery), followed by his decline as this congruence of self-image with the view of others again fractures. In this story, Alice plays a crucial role in affirming Charly’s sense of self. Her interactionist function is clearly symbolized in the antique hand-mirror which he tries to give to her as a present: she is the figurative mirror who reflects back a coherent image of Charly. Her angry rejection of him, ‘you stupid moron!’, shatters his sense of ontological security, and precipitates the movie’s most striking deployment of multiple panels. This section of the movie is marked by florid use of multiple panels, which mix chronology, action, and location – including scenes of Alice ruminating alone in Charly’s absence – before the two are finally reconciled.

This concern with the dialogic creation of the self has stylistic implications beyond the movie’s use of split-screen. *Charly* uses a plurality of cinematic codes to convey the sense

of a cultural struggle among competing codes that might represent the action of the story. To borrow from Bakhtin's literary theory, *Charly* attempts what I would call a 'heteroscopic' style, analogous to the heteroglossia of the novel. For Bakhtin, the artistic prose writer encounters 'the unfolding of social heteroglossia *surrounding* the object, the Tower-of-Babel mixing of languages that goes on around any object; the dialectics of the object are interwoven with the social dialogue surrounding it' (Bakhtin 1981, 278). Rather than succumb to the poetic tendency to single authoritative discourse, the novel's style puts any discourse into dialogue with a 'background made up of contradictory opinions, points of view and value judgements' (Bakhtin 1981, 281).

Charly attempts something similar for cinema, putting its 'object' (a cognitively impaired, then enhanced protagonist) into an encounter with multiple codes of moving-image representation. This is perhaps most apparent in the antithetical codes which accrue to the sexual relationship between Charly and Alice, which extends beyond merely Charly's first-person viewpoint shots of her body. *Charly* was released in 1968, the same year as *The Boston Strangler* (dir. Richard Fleischer), and in the cultural aftermath of Albert DeSalvo's 13 serial murders in the period 1962–1964. When Charly attempts firstly to seduce, then rape Alice, the movie borrows conventions from the crime thriller as the protagonist briefly becomes a stalker/intruder figure. An elevated shot of a car pulling up at Alice's apartment block offers Charly's secret perspective, and the voyeurism continues as the camera, offering Charly's point of view, observes Alice and her fiancée through the mesh window of a stairwell door. The shots continue to conceal Charly's identity as, after her fiancée leaves, he approaches with a package and buzzes at her door. The allusions to DeSalvo are emphasized when Charly talks with Alice inside her home: we are given close shots of his hands, compulsively winding and unwinding the ribbon from his package. In contrast, the love affair between Charly and Alice that ensues after the former's adolescent crisis has been described by Keyes as akin to a 'shampoo or deodorant TV commercial' (Keyes 2004, 155). A contemporaneous reviewer's summary is sufficient: the relationship is condensed into 'a Lelouch/Cigarette Ad montage of trees, leaves, boats, water, sunlight, moonlight, and general soft-focus glitter' (Milne 1968, 192) – the reference to the French director Claude Lelouch (1937–) invokes the aesthetic of his 1966 Cannes Palme d'Or and Academy Award winner, *Un Homme et Une Femme*.

But *Charly*'s heteroscopia does not merely destabilize popular genre film (and its representation of Charly's sexuality as either predation or romantic love). It extends also to codes weighted with visual truth: the post-op Charly is shown, for instance, assimilating educational materials on US political history in the form of a short expository film followed by recorded questions. These materials are delivered by what the credits reveal to be an 'Audio-visual Teaching Machine by Panacolor, Inc' – a pedagogic variation on the film (probably Super 8) cartridge machines which were also marketed for home and hotel entertainment (Kahlenberg and Aaron 1970). Two such codes of visual truth are especially pertinent to representations of the cognitively impaired. Alice and Strauss's conversation at the clinic, as explained above, casts cognitively impaired children in (most likely) a real-life Coletta School, and – excluding its use of split-screen – sits somewhere between documentary and Italian neorealism. The latter was characterized by stylistic features such as 'a preference for location filming, the use of nonprofessional actors, the avoidance of ornamental *mise-en-scène*, a preference for natural light, a freely-moving documentary style of photography, [and] a non-interventionist approach to film directing' (Shiel 2006, 2). Such commitment to a register of supposed visual truth is obviously augmented by the scene's intention to show the life of an excluded social group, viz. cognitively impaired children (rather than the working-class Italians of neorealism). A similar language of visual truth occurs in an early scene. As Charly takes various IQ tests under Alice's supervision at the

clinic, the pair are observed and filmed through a one-way mirror by the researchers. There is no extradiegetic musical soundtrack (unlike previous scenes, where the score was aurally foregrounded), and some of the cuts imply a shot position from the intra-diegetic camera. The film stock is also notably much grainier and dirtier than in the rest of the movie – presumably in conscious imitation of low-budget scientific filming.

But these codes, which set up the cognitively impaired person as a social problem to be objectively documented and scientifically investigated, contrast with the shift into interiority that occurs after Charly learns (from Algernon's death) that he is fated not only to renewed impairment but to a premature death. He flees from the convention center into the streets of Boston, and then makes his way back to the swings at his favored playground. An image of the pre-op Charly materializes on the swing next to him – exteriorizing the inner return of his earlier self-image. After a further scene of Charly running through night-time Boston haunted by his cognitively impaired double, the movie presents a shot of Algernon running through the experimental maze, before cutting to shots of Charly, filmed through a heavy blue filter, running through an analogous maze of anonymous corridors, frantically trying to open locked doors. The image of the pre-op Charly appears at every turn as Charly attempts to escape his pending decline. The corridors resemble no previous location in the film (not even the clinic), and the action is very clearly freighted with dream-like symbolism.

The *New York Times* reviewer (Canby 1968) who denounced the movie's apparent generic indeterminacy ('science-fiction without gadgets, a horror film without thrills') alongside its lack of 'cohesion of style', misunderstands the novelistic aesthetic of the movie. Charly's plural visual style and genre transgressions are aesthetic decisions attuned to its engagement with the politics of disability. The movie's heteroscopia resists the centripetal tendency to filmmaking within a single authoritative or neutral style – be it drawn from entertainment, art cinema, documentary, or science. The visual styles of representation for Charly's trajectory are always situated as codes that emanate from particular social positions to other specific addressees and for certain purposes: there is no uncontested 'neutral' representation, particularly of cognitively impaired persons.

Conclusion

Charly is undoubtedly a motion picture with shortcomings. The relationship between Charly and Alice that dominates the latter part of the movie funnels the narrative into the *pathos* of a failed romance, severing the interesting threads that were woven into the earlier scenes, particularly prior to the neurosurgical turning point. Moreover, Alice's unexplained reconciliation with Charly after his sexual assault is particularly jarring. A subsequent adolescent identity crisis is indicated for Charly, but Alice's change of heart is unexplained – she becomes a plot device rather than the complex agent shown earlier in the movie. Yet, the movie has unacknowledged strengths, particularly in its thoughtful and sometimes skeptical engagement with the changing status of the cognitively impaired in the 1960s. The movie enacts normalization in its inclusion of cognitively impaired cast members. And, in both form and content, it is also perceptive about the roles – and role-playing – into which cognitively impaired persons may be inducted. The movie also presses at the limits of normalization in this period (and perhaps ours). How effective can this program be when intelligence is so highly valued in society, when normalization may simply mean working for a pittance in a menial job, and when the sexuality of cognitively impaired persons provokes fear and anxiety? Moreover, what seem like stylistic and genre deficiencies indicate instead an aesthetic that aims to situate visual codes of representations in concrete societal, cultural, and economic contexts. *Charly* is not so much generically and stylistically homeless, as

consciously itinerant. The puzzle, perhaps, is why critical discourse on film has so little sympathy for its heteroscopic aesthetic.

The comparative neglect of *Charly* also has implications beyond merely our capacity to evaluate and understand the movie. Keyes's testimony above on the pedagogic materials surrounding both film and novel suggest, for instance, the potential for historical study of *Charly*'s exhibition and deployment in educational contexts, particularly in 1970s USA. The movie's place in cinematic history may also be underacknowledged: most obviously, its treatment of intellectual disability should be set alongside better-known comparators such as *Being There*, *Rain Man*, *Forrest Gump* and *I am Sam* (c.f. Callus 2019). There are also less obvious comparisons and connections. For instance, the critically and commercially successful *Good Will Hunting* (1997, dir. Gus Van Sant), seems to transpose the basic myth of *Charly*. Robertson's character is a low-IQ working-class South Bostonian who is eager to learn but lacks cognitive ability until assisted by experts in the mind who turn him into a polymath genius. Matt Damon's working-class South Bostonian, on the other hand, is an innate genius who overcomes his aversion to formal education – and, like *Charly*, with the necessary help of psychological expertise, this time from psychotherapy.

Within science fiction studies, *Charly* offers an opportunity for translation and transmedial studies of the different versions and adaptations. As well as the TV, short story, novel and film versions discussed above, there are many others. These include Anglophone adaptations across different media in the succeeding decades: a 1969 stage play; a 1978 musical adaptation *Charlie and Algernon* that had modest success in its West End and Broadway productions; a 1991 BBC Radio play and 1993 published playscript aimed at secondary schools (adapted in character and setting to the UK); and a CBS television movie in 2000 starring Matthew Modine. There are further English language media adaptations and versions that have not yet been fully recorded, such as the long-playing album of the London musical production, and Robertson's abortive attempt at a sequel (Keepnews and Severo 2011). All this is to say nothing of editions and translations for other territories: Keyes refers to 'twenty-seven foreign editions', including a highly successful Japanese edition that was used in English teaching (Keyes 2004, 169). We are very much in the dark about their internal logic, contextual history, and the transmedial decisions that have informed them. Science fiction studies methodologies would be expanded further in such an enterprise – including for instance the concepts and methods necessary to study science fiction as musical theatre or as pedagogic instrument.

Works cited

- Allan, Kathryn. 2013. "Reading Disability in Science Fiction." In *Disability in Science Fiction: Representations of Technology as Cure*, edited by Kathryn Allan, 1–15. New York: Palgrave Macmillan.
- Allan, Kathryn, and Ria Cheyne. 2020. "Science Fiction, Disability, Disability Studies: A Conversation." *Journal of Literary & Cultural Disability Studies* 14 (4): 387–401.
- Bakhtin, M. M. 1981. *The Dialogic Imagination: Four Essays*. Translated by Caryl Emerson and Michael Holquist. Austin: University of Texas Press.
- Callus, Anne-Marie. 2019. "The Cloak of Incompetence: Representations of People with Intellectual Disability in Film." *Journal of Literary & Cultural Disability Studies* 13 (2): 177–194.
- Canby, Vincent 1968. "The Screen: Cliff Robertson in Title Role of 'Charly'." *New York Times*, 24 September, 1968, 55.
- Cooley, Charles Horton. 1983. *Human Nature and the Social Order*. New Brunswick, NJ: Transaction. 1922.
- "Dialogue on Film: Stirling Silliphant." 1988. *American Film*, 1 March, 13–15.
- Green, Guy, dir. *The Light in the Piazza*, 1962; Amazon Prime Video, 2012. Online streaming.
- Hunt, Dennis. 1969. "[Review of *Charly*]." *Film Quarterly* 22 (3): 60.
- Kahlenberg, Richard, and Chloe Aaron. 1970. "The Cartridges Are Coming." *Cinema Journal* 9 (2): 2.
- Keely, Karen. 2004. "Sexuality and Storytelling: Literary Representations of the 'Feeble-minded' in the Age of Sterilization." In *Mental Retardation in America: A Historical Reader*, edited by Steven Noll and James W. Trent, In The History of Disability, 207–231. New York: New York University Press.
- Keepnews, Peter, and Richard Severo. 2011. "Cliff Robertson, 88, Oscar-Winning Rebel." *New York Times*, 12 September, 2011, 1.
- Kennedy Shriver, Eunice. 1962. "Hope for Retarded Children." *Saturday Evening Post*, 22 September, 71–74.
- Keyes, Daniel. 2004. *Algernon, Charlie, and I: A Writer's Journey*. Harvest: Orlando, FL. 1999.
- McCaffrey, Tony. 2019. *Incapacity and Theatricality: Politics and Aesthetics in Theatre involving Actors with Intellectual Disabilities*. Abingdon, Oxon: Routledge.
- Miller, Gavin. 2020. *Science Fiction and Psychology*. Liverpool: Liverpool University Press.
- Milne, Tom. 1968. "Charly." *Monthly Film Bulletin*, 191–192.
- Mitchell, David T., and Sharon L. Snyder. 2000. *Narrative Prosthesis: Disability and the Dependencies of Discourse*. Ann Arbor, MI: University of Michigan Press.
- Nelson, Ralph, dir. 2001. *Charly*. 1968; Pearson Television International, 2001. DVD.
- Nicholls, Peter, and Jonathan Clements. 2021. Flowers for Algernon. In *The Encyclopedia of Science Fiction*, edited by John Clute, David Langford, Peter Nicholls and Graham Sleight. http://www.sf-encyclopedia.com/entry/flowers_for_algernon
- Oliver, Michael, and Colin Barnes. 2012. *The New Politics of Disablement*. London: Macmillan Education.
- Shatnoff, Judith. 1967. "Expo 67: A Multiple Vision." *Film Quarterly* 21 (1): 2–13.
- Shiel, Mark. 2006. *Italian Neorealism: Rebuilding the Cinematic City*. London: Wallflower.
- Sklar, Howard. 2013. "The Many Voices of Charlie Gordon: On the Representation of Intellectual Disability in Daniel Keyes's *Flowers for Algernon*." In *Disability in Science Fiction: Representations of Technology as Cure*, edited by Kathryn Allan, 47–59. New York: Palgrave Macmillan.

- Slotnik, Daniel E. 2014. "Daniel Keyes, a Novelist Of the Mind, Dies at 86." *New York Times*, 18 June, 2014, 1.
- Spencer, Elizabeth. 1960. *The Light in the Piazza*. London: Heinemann.
- Trent, James W. 2017. *Inventing the Feeble Mind: A History of Intellectual Disability in the United States*. 2nd ed. New York: Oxford University Press.
- Wolfensberger, Wolf. 1972. *The Principle of Normalization in Human Services*. Vol. Book, Whole. Toronto: National Institute on Mental Retardation.