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Malthus at the Movies: Science, Cinema, and Activism around *Z.P.G.* and *Soylent Green*

by JESSE OLSZYNSKO-GRYN and PATRICK ELLIS

Abstract: This article investigates cinema's engagement with the Malthusian movement to control global overpopulation in the long 1960s. It examines the contested production and reception of *Z.P.G.: Zero Population Growth* (Michael Campus, 1972) and *Soylent Green* (Richard Fleischer, 1973) to shed new light on the nexus of science, activism, and the media. It argues that the history of the movement, usually reconstructed as an elite scientific and political discourse, cannot be fully understood without also taking into account mass-market entertainment.

The Science-Activism-Media Nexus. In the early 1970s, two Hollywood films portrayed the coming millennium as desperately overcrowded and polluted, fast running out of resources and space. Both *Z.P.G.: Zero Population Growth* (Michael Campus, 1972) and *Soylent Green* (Richard Fleischer, 1973) were products of the “Malthusian moment,” a brief peak in the late 1960s and early 1970s of environmental concerns with world population growth and its control, but they also differed in significant ways.¹ *Z.P.G.* imagined a totalitarian state that banned childbirth on penalty of death, fared as poorly at the box office as with critics, and became embroiled in a major fracas with the grassroots organization Zero Population Growth (ZPG). *Soylent Green* envisioned a powerful corporation that perpetuated mass cannibalism, performed well at the box office, and generally satisfied activists as a politically neutered, if passably ecological, “message” film.

Although Malthusian environmentalism was as much about birth control as the biosphere, scholars have generally framed both films in terms less of reproductive politics than of environmentalism. As early as 1978, Joan Dean's influential

1 See Thomas Robertson, *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism* (New Brunswick, NJ: Rutgers University Press, 2012).

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essay on science fiction cinema, “Between *2001* and *Star Wars*,” established *Z.P.G.* and *Soylent Green* as part of a Hollywood cycle of decidedly terrestrial and often ecologically themed dystopian films.² Dean argues that during this period, overcrowding and resource depletion became central to Hollywood as nuclear fears temporarily subsided and were largely displaced by new anxieties—around Watergate, Vietnam, and the oil crisis.³ Now widely regarded as the first film to explicitly mention the greenhouse effect, *Soylent Green* has subsequently been embraced both within and beyond the academy as a prescient cautionary tale.⁴ *Z.P.G.*, in contrast, has “fallen into obscurity . . . unclaimed, unloved and abandoned, even by genre fans.”⁵

Histories of population control, meanwhile, have tended to privilege the somewhat rarefied intellectual discourses of scientific and political elites. Mass communication and public perception receive little more than passing commentary in these histories, if they are mentioned at all.⁶ This is a major oversight for the analysis of a movement that was fundamentally about reaching a large proportion of the world’s population. But approaches are starting to change, and recent accounts have foregrounded the circulation of iconic images in environmentalism as well as the use of educational films in sex education, birth control, and family planning.⁷ Media scholars have given cinema and television a starring role in revisionist histories of the sexual revolution, and historians of reproduction have made communication more central to their accounts as well.⁸ Science, activism, and the moving image have also been coming

- 2 Joan F. Dean, “Between *2001* and *Star Wars*,” *Journal of Popular Film and Television* 7, no. 1 (1978): 32–41; David A. Kirby, *Lab Coats in Hollywood: Science, Scientists, and Cinema* (Cambridge, MA: MIT Press, 2010), 172–173.
- 3 James Chapman and Nicholas J. Cull, *Projecting Tomorrow: Science Fiction and Popular Cinema* (London: I. B. Tauris, 2013), 5.
- 4 See Noreena Hertz, *The Silent Takeover: Global Capitalism and the Death of Democracy* (New York: Free Press, 2001), 236–237; Stephen Rust, “Hollywood and Climate Change,” in *Ecocinema Theory and Practice*, ed. Stephen Rust, Salma Monani, and Sean Cubitt (London: Routledge, 2013), 191–211.
- 5 James Leggott, “ZPG: Zero Population Growth,” *Science Fiction Film and Television* 3, no. 2 (2010): 335–338, 335.
- 6 The major histories are Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge, MA: Harvard University Press, 2008); Derek S. Hoff, *The Stork and the State: The Population Debate and Policy Making in US History* (Chicago: University of Chicago Press, 2012); Robertson, *Malthusian Moment*; Alison Bashford, *Global Population: History, Geopolitics, and Life on Earth* (New York: Columbia University Press, 2014); and Carole R. McCann, *Figuring the Population Bomb: Gender and Demography in the Mid-Twentieth Century* (Seattle: University of Washington Press, 2017).
- 7 Elisabet Björklund, *The Most Delicate Subject: A History of Sex Education Films in Sweden* (Lund: University of Lund Publications, 2012); Manon Parry, *Broadcasting Birth Control: Mass Media and Family Planning* (New Brunswick, NJ: Rutgers University Press, 2013); Birgit Schneider and Thomas Nocke, eds., *Image Politics of Climate Change: Visualizations, Imaginations, Documentations* (Bielefeld, Germany: Transcript, 2014); Finis Dunaway, *Seeing Green: The Use and Abuse of American Environmental Images* (Chicago: University of Chicago Press, 2015).
- 8 See Eric Schaeffer, ed., *Sex Scene: Media and the Sexual Revolution* (Durham, NC: Duke University Press, 2014); Nick Hopwood, Peter Murray Jones, Lauren Kassell, and Jim Secord, “Introduction: Communicating Reproduction,” *Bulletin of the History of Medicine* 89, no. 3 (2015): 379–404; Jesse Olszynko-Gryn and Patrick Ellis, “‘A Machine for Recreating Life’: An Introduction to Reproduction on Film,” *British Journal for the History of Science* 50, no. 3 (2017): 383–409.

together in histories of the antinuclear movement's engagement with nuclear-disaster cinema and television.⁹

Taking cinema as the example, in this article we investigate the science-activism-media nexus in the case of Malthusian thinking about global population and its control in the early 1970s. We show how film and fiction were not downstream of elite scientific and political discourses. They did not simply mirror these discourses but were produced and consumed, from screenplay to screening, through a process of negotiation and contestation. As we shall see, ZPG the organization fought back against *Z.P.G.* the movie, and the explicitly anti-Catholic, pro-contraception message of the book adapted for *Soylent Green* was lost in the production process. But first, we take a step back to consider more broadly how Malthusians engaged with different genres and forms of mass communication in the long 1960s.

Malthusians and Mass Communication in the Long 1960s. The long 1960s, a politically tumultuous period from the mid-1950s to the mid-1970s, was marked by a deepening crisis in scientific authority.¹⁰ It also saw a confluence of science fiction's expository techniques and ecology's concern with the near, extrapolated future.¹¹ Not only did professional science fiction writers forecast ecological doom; prominent ecologists also fictionalized their own predictions. Take Rachel Carson's *Silent Spring* (1962) and Paul Ehrlich's *The Population Bomb* (1968), the two most influential books of American environmentalism. *Silent Spring*, above all concerned with the effect of pesticides on birds, contributed to the ban on DDT a decade after its publication. But from a literary perspective, its enduring success is today partly attributed to Carson's affective blend of science fact and fiction, especially in her book's memorable preface, "A Fable for Tomorrow."¹² At the time, however, Carson's rhetorical strategy left her vulnerable to attack. A marine biologist by training, she risked undermining her own scientific authority by penning evocative, fictionalized prose. Agricultural scientists dismissed *Silent Spring* as science fiction on par with *The Twilight Zone*, while other experts openly disagreed with Carson's data.¹³

9 Deron Overpeck, "'Remember! It's Only a Movie!': Expectations and Receptions of *The Day After* (1983)," *Historical Journal of Film, Radio and Television* 32, no. 2 (2012): 267–292; Daniel Cordle, "That's Going to Happen to Us. It Is': Threads and the Imagination of Nuclear Disaster on 1980s Television," *Journal of British Cinema and Television* 10, no. 1 (2013): 71–92; Tony Shaw, "'Rotten to the Core': Exposing America's Energy-Media Complex in *The China Syndrome*," *Cinema Journal* 52, no. 2 (2013): 93–113.

10 Jon Agar, "What Happened in the Sixties?," *British Journal for the History of Science* 41, no. 4 (2008): 567–600.

11 Karlheinz Steinmüller, "Science Fiction and Science in the Twentieth Century," in *Companion to Science in the Twentieth Century*, ed. John Krige and Dominique Pestre (London: Routledge, 1997), 339–360.

12 M. Jimmie Killingsworth and Jacqueline S. Palmer, "Silent Spring and Science Fiction: An Essay in the History and Rhetoric of Narrative," in *And No Birds Sing: Rhetorical Analyses of Rachel Carson's "Silent Spring"*, ed. Craig Waddell (Carbondale: Southern Illinois University Press, 2000), 174–204; Lisa H. Sideris, "Fact and Fiction, Fear and Wonder: The Legacy of Rachel Carson," *Soundings* 91, nos. 3–4 (2008): 335–369; Joshua David Bellin, "Us or Them! Silent Spring and the 'Big Bug' Films of the 1950s," *Extrapolation* 50, no. 1 (2009): 145–168.

13 Gary Kroll, "The 'Silent Springs' of Rachel Carson: Mass Media and the Origins of Modern Environmentalism," *Public Understanding of Science* 10, no. 4 (2001): 403–420, 418; Mark Hamilton Lytle, *The Gentle Subversive: Rachel Carson, "Silent Spring," and the Rise of the Environmental Movement* (Oxford: Oxford University Press, 2007), 173.

Ehrlich's best seller was published in paperback by the Sierra Club, a well-established environmental group, in partnership with Ballantine Books, known for publishing politically engaged science fiction alongside serious nonfiction dealing with social issues such as contraception, nuclear energy, and the environment.¹⁴ A butterfly ecologist with no formal training in demography, Ehrlich, too, invited criticism by presenting readers of *The Population Bomb* with not one but three fictitious "doomsday scenarios" variously combining mass famine, plague, and nuclear war.¹⁵ Ehrlich later regretted the use of these scenarios as the "biggest tactical error in *The Bomb*" because it enabled critics to cite their "failure to occur" as a "failure of prediction."¹⁶ But as others have noted, it was the book's "tragic apocalyptic inflection" that "produced both its phenomenal success and enduring scandal."¹⁷

The mobilization of science fiction was part of a broader educational strategy widely adopted not only by individual authors but also by organizations such as ZPG. Cofounded by Ehrlich in 1968, the same year *The Population Bomb* was published, ZPG was headquartered in Palo Alto, California, where Ehrlich taught at Stanford.¹⁸ From January 1970, the charismatic professor effectively used his many appearances on Johnny Carson's *The Tonight Show* to promote both his book and the organization.¹⁹ By 1971, ZPG had grown to thirty-five thousand members in more than four hundred local and state chapters, mainly along the academic corridors of the Northeast and countercultural California.²⁰ A political lobbying force with catchy slogans including "Stop Heir Pollution" and "Make Love, Not Babies," ZPG distributed newsletters and organized letter-writing campaigns.²¹ It also edited and supported the publication of an anthology of science fiction short stories devoted to overpopulation, *Voyages: Scenarios for a Ship Called Earth* (1971).²²

Also published by Ballantine and showcasing such luminaries as J. G. Ballard, Ray Bradbury, and Doris Lessing, *Voyages* contained a comprehensive paratext to encourage readers' deeper engagement.²³ Paul and his wife, Anne Ehrlich, provided the introduction; a sample letter was included at the back to promote activism; and didactic introductory material and scholarly bibliographies framed each section. ZPG not only invited readers

14 Kenneth C. Davis, *Two-Bit Culture: The Paperbacking of America* (Boston: Houghton Mifflin, 1984), 331.

15 Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine, 1968), 72.

16 Paul R. Ehrlich and Anne H. Ehrlich, "The Population Bomb Revisited," *Electronic Journal of Sustainable Development* 1, no. 3 (2009): 63–71, 67. For a contemporaneous critique of ecological doomsayers, including Carson and Ehrlich, see John Maddox, *The Doomsday Syndrome* (London: Professional Library, 1972).

17 Greg Garrard, *Ecocriticism*, 2nd ed. (New York: Routledge, 2012), 109.

18 "ZPG: A New Movement Challenges the U.S. to Stop Growing," *Life*, April 17, 1970, 32–37; Shirley L. Radl, "Zero Population Growth, Inc.: Past, Present, and Future," *Biological Conservation* 3, no. 1 (1970): 71–72; Wade Greene, "The Militant Malthusians," *Saturday Review*, March 11, 1972, 40–49.

19 Paul Sabin, *The Bet: Paul Ehrlich, Julian Simon, and Our Gamble over Earth's Future* (New Haven, CT: Yale University Press, 2013), 1–2.

20 Hoff, *Stork and the State*, 179, 320.

21 Hoff, *Stork and the State*, 180.

22 Rob Sauer, ed., *Voyages: Scenarios for a Ship Called Earth* (New York: Ballantine, 1971).

23 See Jon Adams, "Real Problems with Fictional Cases," in *How Well Do Facts Travel? The Dissemination of Reliable Knowledge*, ed. Peter Howlett and Mary S. Morgan (Cambridge: Cambridge University Press, 2011), 167–192.

to take the dystopian futures imagined in *Voyages* as seriously as demographers' forecasts but also instructed its members on how to use the book—as “a tool for ZPG.”²⁴ An essay in the *ZPG National Reporter* directed members to confirm the book's availability in shops and ensure that it was displayed prominently; then (“for the brazen”) they could forge the anthologist's signature in the local copies of the book; and finally, it encouraged them to “Write a book review. Get one written. Get one published.”²⁵ But the printed word could go only so far, so zero populationists also set their sights on the moving image.

As the 1960s wore on, activists opposed to mainstream culture made “underground” movies of their own and “New Hollywood” directors fêted outlaws and misfits as the new, countercultural antiheroes.²⁶ Network television, in contrast, was more resistant to change. It was, after all, “an invited guest into American homes,” as CBS repeatedly put it in its dealings with *The Smothers Brothers Comedy Hour*, a satirical variety show that was relentlessly censored and ultimately canceled by the network.²⁷ Frustrated by television's conservatism, some members of ZPG playfully reimagined what its content might look like if they were in control. For example, in “Towards New Images,” her essay for the February 1972 issue of the *ZPG National Reporter*, Ellen Peck lamented that daytime television's “birth rate” rivaled “that of Latin America!”²⁸ Peck, who was a leading advocate of the “childfree” movement, singled out an advertisement for Pampers diapers in which “several children stand over a crib and discuss Pampers, [and] one child comments, ‘I'm going to tell my mommy I want a new baby brother, too.’” She argued that the product on offer was not diapers, but rather children, and rewrote the commercial as follows:

Unobjectionable Pampers Commercial (30 sec.)

Girl: Hello, I'm Judy Singer. I'm president of my town's chapter of Zero Population Growth. For our country's sake—and for our children's sake—I hope you won't have more than two children. If there should be a new baby at your house, though, I'd like to suggest you try new recycled-paper Pampers, because (shows Pampers) they have an outer absorbent layer that keeps babies dryer.²⁹

Peck's fantasy rewrite gives us a sense of ZPG's stake not only in the fate of the biosphere but also in women's reproductive choices and the reproductive narratives

24 “Using Voyages,” *ZPG National Reporter*, September 1971, 14.

25 “Using Voyages,” 14.

26 David E. James, “‘The Movies Are a Revolution’: Film and the Counterculture,” in *Imagine Nation: The American Counterculture of the 1960s and '70s*, ed. Peter Braunstein and Michael William Doyle (New York: Routledge, 2002), 275–303; Thomas Elsaesser, Alexander Horwath, and Noel King, eds., *The Last Great American Picture Show: New Hollywood in the 1970s* (Amsterdam: Amsterdam University Press, 2004).

27 See Steven Alan Carr, “On the Edge of Tastelessness: CBS, the Smothers Brothers and the Struggle for Control,” *Cinema Journal* 31, no. 4 (1992): 3–24, 4.

28 Ellen Peck, “Towards New Images,” *ZPG National Reporter*, February 1972, 8.

29 Peck, “Towards New Images,” 9. On Peck and childfree activism: Jenna Healey, “Rejecting Reproduction: The National Organization for Non-Parents and Childfree Activism in 1970s America,” *Journal of Women's History* 28, no. 1 (2016): 131–156.

purveyed on screen. But with the important exception of Ehrlich's appearances on *The Tonight Show*, ZPG was unable to exert any control over the content of television. Like other grassroots organizations, however, it was able to make short, educational movies.

Produced in 1972 by ZPG's Population Education Project in collaboration with Southern University of Illinois at Carbondale, *World Population!* dramatically depicted the history and future of human population growth as dots (each representing one million people) multiplying on a world map. A short animated film, it originally circulated on 16mm film for a rental fee of \$3.³⁰ A revised version came out on VHS in 1989, and the "Millennium edition" has been viewed millions of times since it was first uploaded to YouTube in 2007.³¹ A further updated 2015 edition uses GIS software to place the dots and includes language tracks in Arabic, English, French, Hindi, Mandarin, and Spanish.³² Although not the first film to thematize overpopulation, it has proved one of the most enduring.

More than a decade before the making of ZPG's classic "dot" film, millions of Americans tuned in to "The Population Explosion" (1959), an award-winning installment of *CBS Reports*.³³ Canada's National Film Board produced *People by the Billions* (1960) and *Population Explosion* (1967), and the Ford Foundation's National Educational Television (NET, later replaced by PBS) broadcast the six-part series *The Population Problem* in 1965. *The Squeeze* (1964), a short experimental film about overpopulation by time-lapse pioneer Hilary Harris, won a Golden Gate Award for best fiction at the San Francisco Film Festival in 1964. And most famously, the Population Council commissioned Walt Disney's *Family Planning* (1967), a ten-minute color cartoon starring Donald Duck that cost \$300,000 to produce.³⁴ Intended for "men and women of reproductive age in the developing countries of Asia, Africa, and Latin America," the council distributed 16mm and 35mm prints of the film in over twenty languages for "showings to small groups in the field and to larger audiences in commercial motion-picture houses and via television."³⁵

During roughly the same period, fictionalized narratives about overpopulation and population control also flourished. A thriving subgenre of science fiction, subsequently dubbed demographic-dystopian, or "demodystopian," was not only published in paperback but also broadcast on radio and television.³⁶ Following Malthusian episodes

30 See Elaine M. Murphy, "Teaching about Population," *American Biology Teacher* 39, no. 9 (1977): 539–541.
 31 *World Population*, millennium ed. (Population Connection, 2000), YouTube video, 7:31, posted by Bob Gumbrecht, September 21, 2007, <https://www.youtube.com/watch?v=4BbkQiQyaYc>.
 32 World Population Video, 5:46, Population Education, A Program of Population Connection, accessed April 9, 2018, <https://populationeducation.org/curriculum-and-resources/world-population-video/>.
 33 Carole R. McCann, "Figuring the Population Explosion: Demography in the Mid-Twentieth Century," *Feminist Media Histories* 3, no. 3 (2017): 30–56.
 34 Parry, *Broadcasting Birth Control*, 1, 89–90.
 35 "The Population Council: The Disney Film on Family Planning," *Studies in Family Planning* 1, no. 26 (1968), unpaginated.
 36 Andreu Domingo, "Demodystopias: Prospects of Demographic Hell," *Population and Development Review* 34, no. 4 (2008): 725–745. For a somewhat different and longer view of cinema's engagement with demography, see Justin Sully, "Cinema and Demography," *Screen* 16, no. 1 (2015): 133–141; Sully, "On the Cultural Projection of Population Crisis: The Case of *The Omega Man*," *Criticism* 58, no. 1 (2016): 87–113.

of radio's *Exploring Tomorrow* (1958) and television's *ABC Stage 67* (1966) and *Star Trek* (1969), *ABC Movie of the Week* aired *The Last Child* on October 5, 1971, just three months before *Z.P.G.* opened nationwide.³⁷ Set in New York "sometime in the not too distant future," the made-for-TV movie follows a young couple's attempt to save their unborn child from state-administered abortion by fleeing the overpopulated police state America has become to Canada, where population control laws are more lenient.³⁸ The narrative structure of defiantly reproductive heroes on the run from draconian authorities, as well as the conservative (profamily, antiabortion) subtext of *The Last Child*, was soon echoed in *Z.P.G.*, the first demodystopian film to be seen not on television, in domestic privacy, but in cinemas across the nation. The name of the film, identical to that of Ehrlich's organization, brought *Z.P.G.* into direct conflict with ZPG.

ZPG versus Z.P.G. In contrast to the typically private or family-oriented experience of television viewing, going to the movies is a public activity with a long and turbulent history of political protest, often against particularly controversial films, directors, or genres.³⁹ Although thematically very similar to *The Last Child*, *Z.P.G.* (the film) uniquely attracted the attention of ZPG (the group) for two main reasons. First, its theatrical release created the space for a direct, public confrontation that television lacked. Second, and more important, the identical name guaranteed that Ehrlich's organization would take notice.⁴⁰ Indeed, the filmmakers may have been strategically trying to trade on the growing public awareness of the term "zero population growth," which had earlier appeared on the cover of *Life* magazine.⁴¹

The film began not as *Z.P.G.*, but as *The First of January*, an original screenplay by Max Ehrlich (no relation to Paul) and Frank De Felitta.⁴² In 1971, the screenplay was made into *Z.P.G.* by first-time director Michael Campus and simultaneously adapted into a novel, *The Edict*, by Max Ehrlich. Published as a film tie-in paperback by Bantam and in hardcover for Nelson Doubleday's Science Fiction Book Club, *The Edict* was ominously (and reproductively) dedicated:

37 See Michael Smith, "The Short Life of a Dark Prophecy: The Rise and Fall of the 'Population Bomb' Crisis, 1965–1975," in *Fear Itself: Enemies Real and Imagined in American Culture*, ed. Nancy Lusignan Schultz (West Lafayette, IN: Purdue University Press, 1998), 331–354.

38 Michael McKenna, *The ABC Movie of the Week: Big Movies for the Small Screen* (Lanham, MD: Scarecrow Press, 2013), 69. See further Douglas Gomery, "Television, Hollywood, and the Development of Movies Made-for-Television," in *Regarding Television: Critical Approaches—An Anthology*, ed. E. Ann Kaplan (Los Angeles: University Publications of America, 1983), 120–129.

39 Charles Lyons, *The New Censors: Movies and the Culture Wars* (Philadelphia: Temple University Press, 1997); Samantha Barbas, "The Political Spectator: Censorship, Protest and the Moviegoing Experience, 1912–1922," *Film History* 11, no. 2 (1999): 217–229.

40 Berkeley sociologist and demographer Kingsley Davis is generally credited with coining the term in 1967. See Davis, "Population Policy: Will Current Programs Succeed?," *Science* 158, no. 3802 (1967): 730–739; and Davis, "Zero Population Growth: The Goal and the Means," *Daedalus* 102, no. 4 (1973): 15–30.

41 *Life*, April 17, 1970.

42 An award-winning screenwriter, De Felitta later accused director Michael Campus of hiring an English hack "to rewrite the script" and blamed the hack for making his "serious story on overpopulation" into a "comedic . . . disaster." See Frank Appelbaum, "Audrey Rose: The Author Frank De Felitta interviewed," *Films and Filming* 24, no. 2 (1977): 22–24.

To our children . . .
 And their children . . .
 And their children's children.
 If any.⁴³

Although distributed by Paramount, *Z.P.G.* was produced by Edgar Miles Bronfman, an heir to the Bronfman distillery empire of the US Prohibition era.⁴⁴ After briefly serving as MGM's chair, this wealthy businessman and philanthropist founded Sagittarius Productions "to make movies for domestic television and foreign theatrical release."⁴⁵ Although filmed cheaply in Copenhagen, *Z.P.G.* was intended for domestic theatrical release. It starred Geraldine Chaplin—daughter of Charlie Chaplin and Oona O'Neill—and Oliver Reed, the highly regarded actor who by that time was a notorious alcoholic, taking films indiscriminately "to pay the bills for Broome Hall," his extravagant mansion in Surrey.⁴⁶

In the winter of 1971, the freelance journalist Fradley Garner interviewed Campus in Denmark for *Ecology Today*, a recently launched monthly magazine out of Connecticut. Garner's summary of the plot carried consistently to the final version and gives a flavor of how the film was promoted in an environmental context, with a doomy telegraphic relay of plot points:

It is the year 2000, somewhere on this planet. Deaths are clicking off sluggishly. War and disease no longer maintain an ecological balance. World population is increasing at a staggering rate. The crisis is clear and imminent.

In a massive conference room, the world leaders assemble to deal with the nightmare of overpopulation. After furious argument, they return to their own countries to issue the decree: As of the First of January no children may be born for 30 years. The penalty for having a child is death.

The world is plunged into gloom but adjusts swiftly. Babies then in hospitals everywhere are stamped with a sign on their foreheads ["BE": Before Edict] to show they were conceived or born before the deadly decree.

Dolls are sold to women as substitutes for children. The dolls are computerized to make them lifelike. Women are programmed by the State to accept the dolls as their own flesh and blood.

Some women cannot make the adjustment. Carole McNeil (Geraldine Chaplin) resists [with] her husband Russ (Oliver Reed). . . . She decides to have a child, to risk death to keep the cycle of human life going.⁴⁷

43 Max Ehrlich, *The Edict* (New York: Bantam, 1972).

44 Peter C. Newman, *The Bronfman Dynasty: The Rothschilds of the New World* (Toronto: McClelland and Stewart, 1978).

45 Fred Goodman, *Fortune's Fool: Edgar Bronfman Jr., Warner Music, and an Industry in Crisis* (New York: Simon and Schuster, 2010), 21.

46 John Brosnan, *Future Tense: The Cinema of Science Fiction* (London: Macdonald and Jane, 1978), 201; Robert Sellers, *What Fresh Lunacy Is This? The Authorized Biography of Oliver Reed* (London: Constable, 2013), 200–201.

47 Fradley Garner, "The First of January: An Interview by Fradley Garner," *Ecology Today*, January 11, 1972, 3–6, 44–46. Today Campus is best known for his second film, *The Mack* (1973), a "Blaxploitation" classic: Novotny

A crucial turning point, not mentioned by Garner, comes when Carole decides not to go through with a routine postcoital “electronic abortion,” but opts for pregnancy in direct defiance of the edict (see Figure 1). The summary continues:

Throughout her pregnancy Carole wanders about her bewildering world, until the day she moves into an abandoned civil defense bomb shelter in the basement of their home to await the birth of their child.

The neighbors become aware of the child and jealously report Carole to the authorities. She and her family must flee, and they do so under the city through a labyrinth of tunnels, to the open sea, now a polluted disaster, and cross it in search of a new world. They are cast ashore on an island . . . not knowing if they will live or die.⁴⁸

Garner then cautions that the reader can “shrug it off as so much celluloid sci-fi, if you want. But then you pretty well have to dismiss biologist Paul R. Ehrlich’s book . . . and ignore the considered opinions of other scientists who checked every turn of the script.”⁴⁹

Regularly citing *The Population Bomb* as his inspiration, Campus repeatedly insisted that *Z.P.G.* “is not science fiction, it is science fact.”⁵⁰ He further claimed that a team of scientists from New York, Los Angeles, and Copenhagen had determined that a United Nations edict against childbearing was the most plausible outcome of overpopulation.⁵¹ At first activists welcomed Campus’s interest in directing a film about overpopulation, but support began to waver after a special advance screening was provided for the upper levels of ZPG’s leadership, including Paul Ehrlich.

On February 8, 1972, a “Special Report” on *Z.P.G.* was issued as part of the “ZPG Fortnightly Report,” a newsletter distributed among chapter heads. At this stage, the film was seen as “basically positive” so long as “a prologue and/or epilogue can be added to set the picture in a positive context”—and so long as ZPG could receive 5 percent of the film’s earnings for use of the name (estimated before release to equal minimally, \$115,000, or almost \$750,000 dollars today).⁵² Paul and Anne Ehrlich met with Campus to discuss these issues and to see about offering an “endorsement” of the film. In sum, ZPG’s initial interest in *Z.P.G.* had as much to do with marketing and fund-raising (a basic necessity of all grassroots organizations) as with communicating their core message to a mass audience.

Although ZPG was cautiously optimistic that Campus “sincerely tried to make a film that will present the urgency of population stabilization to a mass of unconcerned

Lawrence, *Blaxploitation Films of the 1970s: Blackness and Genre* (New York: Routledge, 2008), 62–77; David Walker, Andrew J. Rausch, and Chris Watson, eds., *Reflections on Blaxploitation: Actors and Directors Speak* (Lanham, MD: Scarecrow Press, 2009), 16–23.

48 Garner, “First of January,” 3–4.

49 Garner, “First of January,” 5.

50 Garner, “First of January,” 6.

51 Garner, “First of January,” 44. Poul Christian Matthiessen, a leading Danish demographer, is the only scientist formally credited as a technical adviser on the film.

52 Hal E. Seielstad, “Special Report on Film ZPG,” February 8, 1972, Paul Ehrlich Papers, Department of Special Collections and University Archives, Stanford University, Stanford, CA (SC0223).



Figure 1. Consecutive screen shots of the contemplated abortion scene in *Z.P.G.* (Paramount, 1972), a dramatic turning point in the reproductive narrative of the film. The novel explains that the “electronic aborting device . . . had replaced the Pill, since by using it there wasn’t the remotest possibility of any unpleasant side effects.” Ehrlich, *Edict*, 68.

apathetic citizens,” *Z.P.G.* also subtly threatened to undermine ZPG’s previously unchallenged sense of ownership over the use and meaning of the phrase “zero population growth.”⁵³ Higher-ups fretted: “If we threaten a lawsuit to block use of the ZPG name Paramount may just change the name back to ‘The First of January’ or ‘The Edict,’ the two previous names and carry on without us.”⁵⁴ Worse, “they might also fight the lawsuit and win, proving ‘ZPG’ is public domain.”⁵⁵ *Z.P.G.* preoccupied the main, Palo Alto branch of ZPG for several months. An epilogue was scripted, submitted to Paramount, and subsequently rejected for length. Despite repeated pleas, Paramount refused to negotiate over a ZPG-scripted supplement. ZPG then filed suit against the corporation for royalties and over the use of their name, but the Superior Court of San Francisco rejected the suit, noting that zero population growth was a concept and demographic goal before it was an advocacy group.⁵⁶

In mid-February, ZPG leaders finally admitted they had no control over the content or name of the film and changed tactics. Going on “crisis alert,” they “urgently” requested the “assistance” of rank-and-file members “to help save our name from gross misuse.”⁵⁷ In practice, this meant getting ZPG’s “side of the story to *every film critic* in the country” to turn “what will already be a poor review . . . into an utterly damaging one.”⁵⁸ From ZPG’s perspective, the main sticking point was the gross discrepancies between the method of population control officially endorsed by Ehrlich’s group and that portrayed

53 Seielstad, “Special Report,” 2.

54 Seielstad, “Special Report,” 2.

55 Seielstad, “Special Report,” 2.

56 News of the Superior Court’s ruling was covered in many regional newspapers; see, for instance, *Tucson Daily Citizen*, April 4, 1972, 22.

57 “Zero Population Growth Crisis Alert,” February 17, 1972, Paul Ehrlich Papers (SC0223).

58 “Zero Population Growth Crisis Alert.”

in Campus’s film. Whereas ZPG officially advocated “personal responsibility for voluntarily restricting child birth,” *Z.P.G.* confronted audiences with “government decrees enforced by pain of death.” Understandably, ZPG leaders worried that any association with *Z.P.G.* would be “very damaging to our image.”⁵⁹

Z.P.G. does seem to have confounded the group’s message. Upon the film’s release in San Francisco, ZPG members canvassed audiences before and after a screening, having viewers fill out a survey to assess the extent of the confusion caused by its plot and title. Volunteers asked a variety of questions, including, “What does the concept of ‘zero population growth’ mean to you?”⁶⁰ The results were not reassuring (see Table 1).

As Table 1 demonstrates, the ratio of people who ticked the desired information about the organization’s goals—convincing people that they should have no more than two children—fell from around three-quarters to just one-third after respondents had seen the film. The number of people who believed, erroneously, that “zero population growth” meant that people should have “no children at all” more than doubled, from eighteen to thirty-eight. Realizing the extent of its public relations trouble, ZPG mobilized. Members were asked to send protest letters to the presidents of Paramount and Gulf & Western (the conglomerate that owned Paramount until 1994), and the embattled organization sent press releases to “all of the nation’s movie critics,” petitioned newspapers to boycott advertisements for the film, published a list of venues planning to screen the film, and held rallies at some of the more than 175 cinemas at which the film opened (see Figure 2).⁶¹

Table 1. Cinemagoers’ responses to the question “What does the concept of ‘zero population growth’ mean to you?” before and after a screening of *Z.P.G.*

Answer	Before	After
People should have no children at all	18	38
People should have no more than two children	79	23
People should have as many children as they want	5	7
Not sure	4	11
Total	106	79

As it happened, ZPG’s campaign targeted a film that fared as poorly at the box office as with critics. Although few critics appeared to respond to ZPG’s plea, *Variety* did append a note about the debacle to their negative review: “A genuinely serious topic is handled so poorly that real-life orgs concerned with population growth are openly

59 “Zero Population Growth Crisis Alert,” 1.

60 “‘Z.P.G.’ Film Survey” and “Board of Directors Monthly Report,” December 1972, Paul Ehrlich Papers (SC0223).

61 Hal Seielstad, “Zealot Paramount Gambles,” *ZPG National Reporter*, April 1972, 3. To open on 175 screens suggests studio confidence in the picture: 175 is only half as many as Paramount booked for *The Godfather* (Francis Ford Coppola, 1972), but seven times as many as for *The Poseidon Adventure* (Ronald Neame, 1972).

debunking it.”⁶² Other media sources focused on the confusion over the title and the lawsuit surrounding it. The *Los Angeles Herald-Examiner* ran the headline, “‘ZPG’ Film Title Hit by Protest.”⁶³ And *Box Office* wryly commented: “With the new PG rating attached to it, Paramount’s ‘Z.P.G.’ (not to be confused with Columbia’s ‘X, Y & Zee’

[a contemporaneous Elizabeth Taylor picture]) is bound to instigate puns and some amount of confusion.”⁶⁴

When the film opened at the Astoria in London, England, the medical journalist Donald Gould advised “serious minded” readers of *New Scientist*, a magazine he had previously edited, to make a donation to Oxfam instead of spending their money on the “appalling imitation of a melodrama.”⁶⁵ Everywhere, negative reviews used reproductive metaphors against the film. *Cue: The Weekly Magazine of New York Life* was the most direct, stating plainly, “The film is a miscarriage.”⁶⁶ Beyond the film’s focus on the issue of procreation, Campus may have invited this trope during his press tour by repeatedly comparing his film to his progeny: “The picture is my child. I have given birth to it. If the eyes are too close together; its nose too bent and it makes too much noise. I am sorry. I hope people will look past its blemishes [*sic*] and get into what I am trying to say.”⁶⁷

The underwhelming response must have come as a relief to ZPG. But



Figure 2. Accompanying the paradoxical tagline—“The time is tomorrow and there’s no time left”—the poster for *Z.P.G.* (Paramount, 1972) includes a cluster of vignettes from the film. Against the backdrop of a crowded planet, the bell-bottomed protagonists resist apprehension by a giant dome; a living child is being pointed to while a robot child is thrown; above, drones circle. These images are a visual *précis* of the film.

despite its commercial and critical failure, the film had precipitated an identity crisis for the activist organization. “What’s in a name?” asked ZPG in its fortnightly report to the board of directors: “There is a steady trickle of letters coming in recommending that we abandon the ZPG name and choose something more positive. Since the advent

62 Review of *Z.P.G.* in *Variety*, April 18, 1972, *Z.P.G.* production file, Margaret Herrick Library, Academy of Motion Picture Arts and Sciences, Beverly Hills, CA.

63 “‘ZPG’ Film Title Hit by Protest,” *Los Angeles Herald-Examiner*, March 29, 1972, B-5.

64 Review of *Z.P.G.* in *Box Office*, May 1, 1972, *Z.P.G.* production file, Margaret Herrick Library.

65 Donald Gould, “Cinema: Zero Population Growth,” *New Scientist*, May 25, 1972, 459.

66 “*Z.P.G.*” review, *Cue*, May 27, 1972, clipping files, *Z.P.G.* production file, Margaret Herrick Library.

67 “His Is Social Conscious Film: *Z.P.G.* Director Blasts ‘Entertaining’ Movies,” *Los Angeles Herald-Examiner*, May 14, 1972.

of the movie that trickle has notably increased. I think the suggestion has merit and deserves some thought from all of you. It is the kind of decision that needs at least six months to implement. Some people are weary of being called zero populationists.”⁶⁸ Professor Wendy Hearst of New York University wrote to ZPG in April 1972: “Dear people, oh, I was up yesterday at a demonstration at the Gulf and Western Building in New York, protesting the Paramount movie titled you know what. When I came away, I began to give some thought to the current situation, and ended up absolutely furious at the organization.”⁶⁹ She went on to request that ZPG change its name.

The organization eventually did change its name, to Population Connection, “America’s voice of population stabilization,” but not until 2002.⁷⁰ The film, meanwhile, continued to attract ridicule, not least for its misleading title, and gradually fell into obscurity.⁷¹ Although today *Z.P.G.* is largely dismissed as a forgettable B movie, it provoked a significant public-image crisis for ZPG in the early 1970s, compelling both mobilization and soul searching in the group’s leadership and rank and file. In the next section we turn to *Soylent Green*, a more commercially successful film that was well received by campaigners. And yet, as we shall see, it was no less an object of contestation and negotiation at the nexus of science, activism, and the media than was *Z.P.G.*

From Contraception to Cannibalism. Whereas *Z.P.G.* has fallen into obscurity, *Soylent Green* has risen to attain “a reputation somewhere between cult and canonical.”⁷² The film is loosely based on the prolific science fiction author Harry Harrison’s best-known work, *Make Room! Make Room!* (1966), the novel Paul Ehrlich endorsed in 1971 as “the most effective fictional treatment of the consequences of the population explosion that I have ever come across.”⁷³ Harrison would later date his interest in overpopulation to a chance encounter—in the New York borough of Queens in the late 1940s—with a member of the Indian Communist Party: “Harry, you will starve with your writing. If you want to make a lot of money, I’ll tell you what you can do: go to India and sell them rubber contraceptives.”⁷⁴

In the early 1960s, determined to write a realistic novel about the near, extrapolated future, Harrison went “to the specialists, the demographers and the petrologists and agronomists, and read a great number of thick books.” All told, he spent five years in

68 “Board of Directors Double Fortnightly Report,” April 1–30, 1972, Paul Ehrlich Papers (SC0223).

69 Wendy Hearst to ZPG, April 13, 1972, Paul Ehrlich Papers (SC0223).

70 Roy Beck and Leon Kolankiewicz, “The Environmental Movement’s Retreat from Advocating U.S. Population Stabilization (1970–1998): A First Draft of History,” *Journal of Policy History* 12, no. 1 (2000): 123–156; Pamela Ann McMullin Messier, “Dissonance in the Population Environment Movement over the Politics of Immigration: Shifting Paradigms of Discourse vis-à-vis Individual Rights and Societal Goals” (PhD diss., University of Southern California, 2006).

71 Brosnan, *Future Tense*, 201; Gene Wright, *The Science Fiction Image: The Illustrated Encyclopedia of Science Fiction in Film, Television, Radio and the Theatre* (London: Columbus, 1983), 281.

72 Leggott, “ZPG,” 335.

73 Thomas M. Disch, ed., *The Ruins of Earth: An Anthology of Stories of the Immediate Future* (New York: Berkley, 1971), 116.

74 Harry Harrison, *Harry Harrison! Harry Harrison!* (New York: Tor, 2014), 271.

preparation, “just digging out the material to make an intelligent estimate of what life would be like in the year 2000 AD. At this time there were no popular nonfiction books on the dangers of overpopulation, overconsumption, pollution and allied problems. But there was a great deal of speculation in the scientific journals that interested me greatly.”⁷⁵ Quoting from former president Dwight D. Eisenhower’s 1959 statement on the US government’s position on birth control (“not our business”), a prologue suggests that by 1999, “this country will need more than 100 per cent of the planet’s resources to maintain our current living standards,” then asks, “In which case, what will the world be like?”⁷⁶

The concern with overpopulation is evident throughout the book. The story begins on a “hot day in August in the year 1999” in a New York City that is “populated as no other city has ever been in the history of the world,” and concludes at the turn of the millennium as a screen in Times Square announces that the population of the United States has reached 344 million.⁷⁷ Alan Aldridge’s psychedelic cover art (for Penguin) depicts human sardines packed in a tin coffin, and a bibliography at the back directs readers to specialist journals (*Population Studies*, *Population Bulletin*) and academic books on overpopulation and contraception. As with *The Edict*, Harrison’s novel is also ominously dedicated:

To
TODD and MOIRA
For your sakes, children,
I hope this proves to be a work of fiction.⁷⁸

The didactic message of *Make Room* is made explicit in a lengthy Socratic dialogue between the conspicuously Jewish character, Solomon Kahn (Sol Roth in the movie), and Shirl Greene, the naïve Irish-Catholic love interest of the central protagonist, detective Andrew Rusch:

“You heard about the Emergency Bill? It’s been schmeared all over TV for the last week.”

“Is that the one they call the Baby-killer Bill?”

“They?” Sol shouted, scrubbing angrily at the boot. “Who are they? A bunch of bums, that’s what. People with their minds in the Middle Ages and their feet in a rut. In other words—bums.”

“But, Sol—you can’t force people to practice something they don’t believe in. A lot of them still think that it has something to do with killing babies.”

“So they think wrong. Am I to blame because the world is full of fatheads?”

75 Harry Harrison, “The Beginning of the Affair,” in *Hell’s Cartographers: Some Personal Histories of Science Fiction Writers*, ed. Brian W. Aldiss and Harry Harrison (London: Weidenfeld and Nicolson, 1975), 76–95, 92.

76 On Eisenhower’s opposition to birth control provision: Donald T. Critchlow, *Intended Consequences: Birth Control, Abortion, and the Federal Government in Modern America* (New York: Oxford University Press, 1999), 41–45.

77 Harry Harrison, *Make Room! Make Room!* (New York: Doubleday, 1966), 9, 222.

78 Original emphasis. In 1966, *Make Room* was simultaneously published in hardcover in the United States by Doubleday and serialized in *Impulse*, a British monthly collection of science fiction stories. Penguin and Berkley Medallion released mass-market paperback editions in 1967. For the complete publication history, see Paul Tomlinson, *Harry Harrison: An Annotated Bibliography* (Holicong, PA: Wildside Press, 2002).

You know well enough that birth control has nothing to do with killing babies. In fact it saves them. Which is the bigger crime—letting kids die of disease and starvation or seeing that the unwanted ones don't get born in the first place?"

"Putting it that way sounds different. But aren't you forgetting about natural law? Isn't birth control a violation of that?"

"Darling, the history of medicine is the history of the violation of natural law. The Church—and that includes the Protestant as well as the Catholic—tried to stop the use of anesthetics because it was natural law for a woman to have pain while giving birth. And it was natural law for people to die of sickness. And natural law that the body not be cut open and repaired. . . . *Everything* was against natural law once, and now birth control has got to join the rest. Because all of our troubles today come from the fact that there are too many people in the world."

"That's too simple, Sol. Things aren't really that black and white . . ."

"Oh yes they are, no one wants to admit it, that's all. Look, we live in a lousy world today and our troubles come from only one reason. Too goddamn many people."⁷⁹

Kahn, the mouthpiece for Harrison's views, goes on to explain—as much to readers as to Greene—that for most of human history, people “bred like flies and died like flies. . . . That's why there never used to be a population problem. The whole world used to be one big Mexico, breeding and dying and just staying about even.”⁸⁰ According to Kahn, this natural state of equilibrium persisted until the arrival of modern medicine: “Death control arrived. . . . People are still being fed into the world just as fast—they're just not being taken out of it at the same rate. . . . So the population doubles and doubles—and keeps on doubling at a quicker rate all the time. We got a plague of people who are living longer. Less people have to be born, that's the answer. We got death control—we got to match it with birth control.”⁸¹ The rant goes on and on. When Greene continues to equate contraception with “killing babies,” an exasperated Kahn, now shouting, explains the “ovarian derby”: “Does anyone give a damn about the millions of sperm that don't make it? The answer is no. So what are all the complicated rhythm charts, devices, pills, caps and drugs that are used for birth control? Nothing but ways of seeing that *one* other sperm doesn't make it either. So where do the babies come in? I don't see any babies.”⁸² The extended expository discussion—including a disquisition, over soup, on the Lippes Loop intrauterine device—was unusually explicit and provocative for science fiction.⁸³ And yet, published two years before *The Population Bomb* and *Humanae Vitae*, Pope Paul VI's encyclical “on the regulation of

79 Harrison, *Make Room*, 172–173.

80 Harrison, *Make Room*, 173.

81 Harrison, *Make Room*, 173. On the idea of modern medicine as “death control” that needed to be balanced by “birth control,” see George Weisz and Jesse Olszynko-Gryn, “The Theory of Epidemiologic Transition: The Origins of a Citation Classic,” *Journal of the History of Medicine and Allied Sciences* 65, no. 3 (2010): 287–326.

82 Harrison, *Make Room*, 174.

83 On abortion in 1960s science fiction writing, see Palmer Rampell, “The Science Fiction of *Roe v. Wade*,” *ELH* 85, no. 1 (2018): 221–252.

birth,” *Make Room* did not make a splash.⁸⁴ On the contrary, as Harrison later mused, the novel “came out too early and vanished with a dull whiffing sound.”⁸⁵ Interest, however, was revived in the early 1970s—by the Malthusian craze triggered by *The Population Bomb* and, more specifically, by the efforts of actor Charlton Heston to bring the book to screen.

Today Heston is remembered not only for his many iconic roles, including Moses in *The Ten Commandments* (Cecil B. DeMille, 1956) and the marooned astronaut in *Planet of the Apes* (Franklin J. Schaffner, 1968), but also as “Hollywood’s most prominent conservative,” whose lifetime of political activism culminated in his presidency of the National Rifle Association.⁸⁶ In the 1950s and 1960s, Heston had used his celebrity status to support civil rights and Lyndon Johnson’s arts programs, but in the early 1970s, he became disillusioned with the Democrats and decisively rejected the political and cultural radicalism of the Left.⁸⁷ Heston was particularly concerned with overpopulation, a then-bipartisan issue supported not only by left-wing environmentalists but also by Republican conservationists and conservative anti-immigration activists.⁸⁸ According to Heston’s biographer, *Soylent Green* was “the only film that Heston made with the express purpose of advancing a political message. The fact that it was a movie about the population boom illustrates how important Heston perceived the issue to be.”⁸⁹

Heston was able to push Harrison’s novel into production at MGM, but only after the commercial success of *Skyjacked* (John Guillermin, 1972), in which he starred.⁹⁰ Initially, he and producer Walter Seltzer invested their own money to have a screenplay written, but MGM was “wary of tackling . . . over-population—no doubt for fear of stepping on religious toes.”⁹¹ As Harrison later discovered, the studio had been eyeing his book “as a possible film” for some years, but only “when a cannibalism twist was added” with Stanley Greenberg’s script did they give it the green light (see Figure 3).⁹²

Variety provided a pithy synopsis of *Soylent Green* upon its release in 1973, one which suggests what were then the most pertinent of the perceived anxieties represented in the film:

84 Harrison, *Make Room*, 174. See Alana Harris, ed., *The Schism of '68: Catholicism, Contraception and "Humanae Vitae" in Europe, 1945–1975* (Basingstoke, UK: Palgrave Macmillan, 2018).

85 Harrison, “Beginning of the Affair,” 93.

86 See, for example, Amy C. Chambers, “The Evolution of *Planet of the Apes*: Science, Religion, and 1960s Cinema,” *Journal of Religion and Popular Culture* 28, nos. 2–3 (2016): 107–122.

87 Emilie Raymond, *From My Cold, Dead Hands: Charlton Heston and American Politics* (Lexington: University of Kentucky Press, 2006), 1.

88 Robert D. Lifset, “In Search of Republican Environmentalists,” *Reviews in American History* 36, no. 1 (2008): 117–125; Sabin, *The Bet*, 189–197; Sebastian Normandin and Sean A. Valles, “How a Network of Conservationists and Population Control Activists Created the Contemporary US Anti-Immigration Movement,” *Endeavour* 39, no. 2 (2015): 95–105.

89 Raymond, *From My Cold, Dead Hands*, 223.

90 Charlton Heston, *In the Arena: An Autobiography* (New York: Simon and Schuster, 1995), 476.

91 Brosnan, *Future Tense*, 200. See Dennis Fischer, *Science Fiction Film Directors, 1895–1998* (London: McFarland, 2000), 196.

92 Harrison, “Beginning of the Affair,” 93.

The year is 2022, the setting N.Y. City, where millions of overpopulated residents exist in a smog-insulated police state . . . where real food is a luxury item. [Charlton] Heston is a detective [named Thorn] assigned to the assassination murder of industrialist Joseph Cotton, who has discovered the shocking fact that the Soy lent Corp. . . . is no longer capable of making synthetic food from the dying sea. The substitute—the reconstituted bodies of the dead.⁹³

Here we have the final, cannibalistic revelation of the film. The oft-quoted line, “Soylent Green is people!,” which Charlton Heston’s character ends the film bellowing, is a Swiftian answer to the Malthusian question, albeit without the satirical intent.⁹⁴

As others have noted, Harrison’s “condemnation of the Catholic Church’s policy on contraception resulting in too many people being born” did not make it into the film.⁹⁵ On the contrary, the overtly Malthusian message of the book steadily diminished in prominence during the adaptation process, which also shifted the original operating title of the film from *Make Room*, after the book, and meant to signify overcrowding, to banal science fiction staples indicating only millennial anxiety, namely *9/99* and later *Thorn: 2022*. There followed a period of ambivalence about the color of the soy-lentil plankton crackers after which the film is named: *Soylent Red* became *Soylent Blue* before finally becoming *Soylent Green*.⁹⁶

As late as August 1972, the script still featured a police researcher saying, “The sea can be revitalized . . . we can enforce birth control,” but that line did not make it in to the final version.⁹⁷ All aspects of human reproduction were subject to Hollywood censorship from the creation of the Production Code Administration in 1934, but such prohibitions had largely abated by 1972.⁹⁸ Contraception may have remained unusually controversial, but it is not entirely clear why birth control was removed from the script. It is possible, as one critic presumed in 1978, that MGM did not want to offend Catholics.⁹⁹ But it may also be that the studio did not want to draw attention to a conspicuous flaw in *Soylent Green*’s logic, namely that contraception would always be a far more obvious and plausible form of population control than “breeding [people] like cattle for food,” as Heston wails in the film’s climax.

Harrison, for one, was appalled by the script, which, he claimed, “transmogrified, denigrated, and deguttled the novel from which it had been taken.”¹⁰⁰ On set,

93 Review of *Soylent Green* in *Variety*, April 18, 1973, 22.

94 See Jonathan Swift, *A Modest Proposal and Other Writings* (London: Penguin, 2009).

95 Fischer, *Science Fiction Film Directors*, 195.

96 For the food context, see Warren Belasco, “Algae Burgers for a Hungry World? The Rise and Fall of Chlorella Cuisine,” *Technology and Culture* 38, no. 3 (1997): 608–634.

97 *Soylent Green* script, August 10, 1972, Charlton Heston papers, Margaret Herrick Library.

98 See David A. Kirby, “Regulating Cinematic Stories about Reproduction: Pregnancy, Childbirth, Abortion and Movie Censorship in the US, 1930–1958,” *British Journal for the History of Science* 50, no. 3 (2017): 451–472.

99 Brosnan, *Future Tense*, 200.

100 Harry Harrison, “A Cannibalized Novel Becomes *Soylent Green*,” in *Omni’s Screen Flights / Screen Fantasies: The Future according to Science Fiction Cinema*, ed. Danny Pearly (New York: Doubleday, 1984), 143–146, 143.



Figure 3. Unlike many science fiction films of the 1970s, the poster for *Soylent Green* (MGM, 1973) pictures not an advanced transportation infrastructure but the future of riot control. The “scoop” trucks shown here are meant to disperse the angry, hungry, overpopulated mob. Thorn (Heston) flees the scoops, but his neckerchief, the only green in the poster apart from the title, is the albatross around his neck, standing for his knowledge of the cannibalism that is Soylent Green.

Soylent Green crackers did, however, resonate with contemporaneous anxieties about the American diet and corruption in the food industry. When *Soylent Green* was in production, Ralph Nader and his “Raiders,” a group of college students and young

he “propagandized everyone in sight, from grips to actors, by giving them copies of the original book.”¹⁰¹ Despite all this, and despite Heston’s active support of family planning organizations, *Soylent Green* presented audiences with a defanged version of *Make Room*. Instead of Catholicism and contraception, we have euthanasia and cannibalism: “[T]hat old sf cliché, the suicide parlor. Something *I* would never do,” and “[I]diotic cannibal-crackers (not in the book),” lamented Harrison.¹⁰² The frenetic montage sequence that begins the film, which traces American history through increasingly urbanized and polluted landscapes, contains the clearest image of environmental crisis. Tellingly, it was produced by Chuck Braverman, a young experimental filmmaker whose influential short film, *American Time Capsule*, had debuted on *Smothers Brothers* in 1967.¹⁰³ But overall, *Soylent Green* failed to visually portray overpopulation. The crowd scenes, as numerous critics have remarked, were “especially disappointing”; there just “weren’t enough people” (see Figure 4).¹⁰⁴

The plot device of a corporate conspiracy to conceal the true nature of

101 Harrison also had plastic bags removed from view in the name of realism; plastic, he explained, “is a petroleum product and all the world’s petroleum had been used up by this time. The bags were instantly whisked away”: Harrison, “Cannibalized Novel,” 144.

102 Harrison, “Cannibalized Novel,” 145.

103 Mitchell Stephens, *The Rise of the Image, the Fall of the Word* (Oxford: Oxford University Press, 1999), 136–137.

104 Barry Keith Grant, *100 Science Fiction Films* (Houndsmills, UK: Palgrave Macmillan, 2013), 143–144; Craig W. Anderson, *Science Fiction Films of the Seventies* (Jefferson, NC: McFarland), 53. Vivian Sobchack, in her classic history of American science fiction films, argued that *Soylent Green* was “at its visual best when convincing us that small things (a tomato, running tap water) are wondrous and strange.” See Sobchack, *Screening Space: The American Science Fiction Film* (New Brunswick, NJ: Rutgers University Press, 1987), 131.

lawyers, had recently published *The Chemical Feast* (1970), a tract on food additives and sourcing, and *Whistle-Blowing* (1972), a conference report that popularized the titular neologism.¹⁰⁵ From food adulteration to the social responsibility of insiders to denounce the corrupt organizations they worked for, *Soylent Green* engaged with themes that were very much in the air at the time and specifically associated with Nader’s project.

Heston’s character, Detective Thorn, who discovers the secret that “Soylent Green is people,” is a police insider, a thorn in the side of a system that perpetrates mass cannibalism. In early iterations of the script, the film did not simply end with the revelation of cannibalism. One draft had New York’s Governor Santini reading out a televised confession: “Those responsible for the unfortunate excesses must be punished. However our only recourse now is to reveal to the people the measures we have taken to nourish them and to protect them. Gentlemen—the time has come to tell the truth!”¹⁰⁶ In another draft, Heston highlighted the line “Food was food before our scientific magicians polluted the water, poisoned the soil, decimated the plant and animal life,” writing in the margins, “is this a hair preachy?? Talk instead about how good it used to be, instead of Nader polemic, which we hear so much of.”¹⁰⁷

In contrast to *Z.P.G.*, *Soylent Green* had “an excellent budget” (around \$4 million), “big name stars” (Heston and Edward G. Robinson), and a seasoned director (Richard Fleischer, who had previously directed *20,000 Leagues under the Sea* [1954] and *Fantastic Voyage* [1966]), and it proved



Figure 4. Screen shots from *Soylent Green* (MGM, 1973); of the establishing shot of New York City, 2022, and of the main crowd scene, a food riot shot through the greenish haze of pollution. Filmed from a barely elevated height, the shot more evocative of an ordinarily bustling marketplace than of a demographic apocalypse.

105 James S. Turner, ed., *The Chemical Feast: The Ralph Nader Study Group Report on Food Protection and the Food and Drug Administration* (New York: Grossman, 1970); Ralph Nader, Peter J. Petkas, and Kate Blackwell, eds., *Whistle Blowing: The Report of the Conference on Professional Responsibility* (New York: Grossman, 1972). See further Daniel Horowitz, *The Anxieties of Affluence: Critiques of American Consumer Culture, 1939–1979* (Boston: University of Massachusetts Press), 162–202.

106 *Soylent Green* script, June 21, 1972, Margaret Herrick Library.

107 *Soylent Green* script. Heston’s bipartisan engagement with environmentalism later expanded beyond the specific issue of population to include soil conservation and renewable energy: Raymond, *From My Cold, Dead Hands*, 222–223.

a moneymaker and a crowd pleaser.¹⁰⁸ Newly organized genre fans awarded *Soylent Green* the first Nebula Award for best script in 1974 and the second Saturn Award for best science fiction film in 1975.¹⁰⁹ In contrast to the uproar over *Z.P.G.*, experts and activists were largely satisfied with the film. A generally positive review in *New Scientist* argued that although *Soylent Green* “never really meets the wider issue of overpopulation head-on,” it nonetheless has a “tight and sophisticated script” and was an “enjoyable thriller.”¹¹⁰

Frank R. Bowerman, an environmental engineer with the Los Angeles solid waste program and technical consultant on *Soylent Green*, personally endorsed the “science-fact suspense film” he had worked on:

I am of the firm conviction that uncontrolled population expansion and its concomitant pollution of the air and the seas is the gravest problem facing mankind. . . . Essentially *Soylent Green* plays a murder melodrama against the background of the burgeoning population. . . . I am involved [with *Soylent Green*] because I fervently believe that action must be taken now to control the unbridled explosion of human beings. . . . There is still time to reverse the trend. With action. The alternative is that *Soylent Green* will be more than a warning. It could become the epitaph for mankind’s gravestone.¹¹¹

In his positive appraisal of *Soylent Green*, Bowerman was typical of many scientific experts who in the 1970s enthusiastically lent their authority to cautionary, ecologically themed films about the future to promote political action in the present.¹¹² Heston, too, remained “very proud of the film and delighted by its success.”¹¹³ Even Harrison was half-pleased with *Soylent Green*, which he conceded had “delivered” the message of his book by showing “what the world will be like if we continue in our insane manner to pollute and overpopulate Spaceship Earth.”¹¹⁴

Reviews in the mainstream press were more ambivalent, however. Influential critic Rex Reed joked in the *New York Daily News* that viewers who did not see the end coming had “flunked Cannibalism 101.”¹¹⁵ Writing for *Time* magazine, Jay Cocks called the film “intermittently interesting,” and *New York Times* critic A. H. Weiler wrote: “*Soylent Green* projects essentially simple, muscular melodrama a good deal more effectively than it does the potential of man’s seemingly witless destruction of the

108 Anderson, *Science Fiction Films of the Seventies*, 53; Brosnan, *Future Tense*, 205. See also John Douglas Eames, *The MGM Story: The Complete History of Fifty Roaring Years* (London: Octopus, 1975), 366.

109 *Soylent* was also nominated for, but did not win, the Hugo.

110 Keith Howes, review of *Soylent Green* in *New Scientist*, July 5, 1973, 38.

111 Frank Bowerman, “Right on Target,” in *MGM Soylent Green Pressbook*, 1973, *Soylent Green* production file, Margaret Herrick Library.

112 Kirby, *Lab Coats in Hollywood*, 172–173.

113 Heston, *In the Arena*, 477.

114 Harrison, “A Cannibalized Novel,” 146. On the then-current spaceship earth metaphor, see Sabine Höhler, *Spaceship Earth in the Environmental Age* (London: Pickering and Chatto, 2015).

115 Paul Meehan, *Tech-Noir: The Fusion of Science Fiction and Film Noir* (Jefferson, NC: McFarland, 2008), 138.

Earth's resources."¹¹⁶ Referring to the downgraded status of the future's women as "furniture," novelist Penelope Gilliatt vented in the *New Yorker*: "The latest Fleischer infection is called 'Soylent Green,' set in the year 2022, and starring scorn for women's lib and virtuous points for antipollution and soil conservation."¹¹⁷

Although unafraid of sex and violence, not to mention euthanasia and cannibalism, *Soylent Green* lacked any reference to contraception. As a result, later viewers came to regard it as a film more about climate change than overpopulation. Above all, it is associated with the famous and now largely decontextualized catchphrase, "Soylent Green is people!" In the 1990s, spoofs on *Saturday Night Live* and *The Simpsons* introduced a younger generation to the "cult" film, and today we can not only buy T-shirts and mock crackers but also drink a meal replacement product named Soylent (if we dare).¹¹⁸ A remake has been rumored for years, and changing tastes have shifted the film's status toward the "best remembered" of the 1970s dystopian science fiction films.¹¹⁹ Although largely disconnected from its origins in the Malthusian moment, *Soylent Green* has gained new contexts and so become newly relevant and differently meaningful.

Follow the Popcorn. In reconstructing the production and reception of the two Hollywood films most directly indebted to Paul Ehrlich's *The Population Bomb*, our goal has been to extend the historical understanding of population control beyond the high-level intellectual and political discourses thus far privileged by historians of the Malthusian moment. Taking cinema as the example, we have argued that fictionalized and filmed scenarios were constitutive of public debates around population, birth control, and the biosphere. As such they should be an essential part of the story. In so doing, we have followed the popcorn to a different kind of story about the nexus of science, countercultural activism, and mass communication in the long 1960s.

From the mid-1950s through the mid-1970s, scientists became politicized campaigners while student protesters turned campuses and laboratories into "theatres of demonstration."¹²⁰ At the confluence of human reproduction and environmentalism, both controversial fields in their own right, population control emerged as one of the most contested areas of research and engagement. As we have demonstrated in this article, it was not only campuses and laboratories but also movie sets and cinemas that became hotly disputed sites of activism as experts and activists alike engaged in public

116 Jay Cocks, "Cinema: Quick Cuts," *Time*, April 30, 1973; A. H. Weiler, "Screen: *Soylent Green*," *New York Times*, April 20, 1973.

117 Penelope Gilliatt, "Hungry?," *New Yorker*, April 28, 1973. On the film's controversial portrayal of women as "furniture," see, for example, Delia González de Reufels, "The End of the American Way of Life: Overpopulation and Its Consequences in *Soylent Green* and *Logan's Run*," in *Reality Unbound: New Departures in Science Fiction Cinema*, ed. Aidan Power, Delia González de Reufels, Rasmus Greiner, and Winfried Pauleit (Berlin: Bertz & Fischer, 2017), 34–55.

118 Meehan, *Tech-Noir*, 138.

119 M. Keith Booker, *Historical Dictionary of Science Fiction* (Lanham, MD: Scarecrow Press, 2010), 249–250. See also Alan L. Gansberg, *Little Caesar: A Biography of Edward G. Robinson* (Lanham, MD: Scarecrow Press, 2004), 257.

120 Agar, "What Happened," 583.

struggles over the control of knowledge about the planet's future, its presentation as fact or fiction, and the very meaning of "zero population growth." Although *Soylent Green* did not provoke a fracas, it was no less an object of negotiation, contestation, and compromise among scientists, activists, and filmmakers than was *Ẓ.P.G.*

When thinking about the science-activism-media nexus in the Malthusian moment, it is important to recall that *Ẓ.P.G.* and *Soylent Green* were conceived, scripted, and produced in years that saw the consolidation and mainstreaming of an ecological movement that culminated in the creation of the US Environmental Protection Agency (1970) and the first Earth Day (1972).¹²¹ This brief, intense period was just as crucial for public debates and legislative reforms around women's reproductive rights. *Ẓ.P.G.* came out in 1972, the same year that the Supreme Court extended the right to birth control to unmarried people and reversed the last of the state laws against contraception.¹²² By then several states had already legalized abortion. *Soylent Green* came out in 1973, the same year that the Court delivered its landmark decision on abortion in *Roe v. Wade*.¹²³ Both films, then, were as much a product of these heady years that liberalized access to contraception and abortion as they were of the heyday of American environmentalism.

As we have shown for both *Ẓ.P.G.* and *Soylent Green*, unless one follows the popcorn, even to a mediocre or downright bad film that failed to make a lasting impression, one cannot adequately understand the Malthusian moment. Grassroots activism around population control was about more than elite intellectual and political discourses. As we have argued in this article, fictionalized and filmed scenarios played a constitutive role in environmental and reproductive activism, and also in the imperative of both movements to reach a large number of people. This makes mass-market fiction, both on paper and on celluloid, a privileged site of contestation.

Fictional scenarios extended activism's engagement with mass communication in the Malthusian moment. But this is not a general rule. In the 1980s, for example, television and video—not cinema—were the mass media of choice for antinuclear and antiabortion activists.¹²⁴ When it comes to the always-contested production of scientific (and medical) authority, the specificity of the medium—from 16mm film to digital video—matters. It matters because different media engender different forms of engagement that can, in turn, lead to different outcomes. Today, we still read books, watch movies, and listen to radio, but social media and the internet increasingly structure our public debates, activist campaigns, and social movements.¹²⁵ Beyond

121 J. Brooks Flippen, *Nixon and the Environment* (Albuquerque: University of New Mexico Press, 2000); Adam Rome, *The Genius of Earth Day: How a 1970 Teach-In Unexpectedly Made the First Green Generation* (New York: Hill and Wang, 2013).

122 John W. Johnson, *Griswold v. Connecticut: Birth Control and the Constitutional Right to Privacy* (Lawrence: University of Press of Kansas, 2005).

123 David J. Garrow, *Liberty and Sexuality: The Right to Privacy and the Making of Roe v. Wade* (Berkeley: University of California Press, 1994).

124 Rosalind Pollack Petchesky, "Fetal Images: The Power of Visual Culture in the Politics of Reproduction," *Feminist Studies* 13, no. 2 (1987): 263–292.

125 For a review of how the internet and social media structure climate change debates, see Mike S. Schäfer, "Online Communication on Climate Change and Climate Politics: A Literature Review," *Wiley Interdisciplinary Reviews: Climate Change* 3, no. 6 (2012): 527–543.

the Malthusian moment, a closer examination of the nexus of science, activism, and communication would do much to enrich the historical understanding of related fields—from abortion, in vitro fertilization, and stem-cell research to nuclear power, fracking, and climate change. *

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