1. Satellites and cargo cults

In Access and Excel (both 2004), two of their early collaborative sculptures, Christian Giroux and Daniel Young combined fluorescent lighting and ventilation ducts, respectively, to make forms equally reminiscent of satellites and minimalist sculptures. The titles of these "HVAC satellites" refer to data-management systems that are widely used in the office environments conjured up by these materials. Both resound with an untimely optimism that connects the consumer's experience of software products with fantasies of "access to tools," as if echoing the tagline of the Whole Earth Catalog (1968-72), a countercultural precursor to Google that connected DIYers of all stripes to suppliers offering everything from survivalist manuals to assembly kits for nomadic habitats. When it appeared on the publication's cover, NASA's first photograph of the "whole earth" taken from space delivered a hopeful message. Back then, this image a homeostatic system capable of self-regulation probably allayed recent fears of local weapons testing and global nuclear threats, despite an emerging awareness of the ecological crisis to come. Today, no such luxury of distance exists. Seeing the whole earth in a satellite photograph is more likely to evoke melting glaciers, rising sea levels, and other visions of total system failure.

In a related series of early sculptures, Young & Giroux created simplified 1:1 scale replicas of satellites shot into the sky on both

sides of the Iron Curtain. Made of powdercoated aluminium, steel sheets, vacuumformed plastic. PVC, and other components. Cosmos, IDCSP, and Alouette (all 2006) were, as the artists have explained, "attempts to recast the geopolitical order of the space race through aesthetic considerations, demonstrating that the space agencies of the East and West had diverging formal conclusions for satellites designed for roughly the same purpose." Like the HVAC sculptures named after Microsoft programs, these called to mind the dashed utopian hopes of the modern era. This includes the "unitary urbanism" theorized by European neo-avant-garde groups like the Lettrists and the Situationists in the 1950s. who imagined an improved public sphere uniting traditional urbanism, cutting-edge technology, the plastic arts, and emancipatory politics. By the 1960s, modernist architecture's aesthetic and technical innovations no longer seemed naturally allied to socially progressive goals. Dystopian scenarios proliferated in film and literature.

Another possible reference for these disappointments is the apocalyptic fiction of English writer J.G. Ballard. In the English language, the adjective "Ballardian" has come to denote a range of dystopian scenarios rooted in the urban and technological fantasies of modernism and the space age, from Le Corbusier's plans for mass housing in the 1920s to the modular habitats imagined by the British group Archigram in the 1960s. In his 1975 novel High-Rise, for example, Bal-

lard imagined what might happen if a tower block for lower-income residents were to merge with luxury condo living for the affluent, featuring all the necessary amenities, from restaurants and swimming pools to supermarkets and hair salons. The bloodbath near the novel's end is the typical Ballardian outcome of a situation where the appearance of spatial harmony organized on the modernist plan conceals the bleaker reality of community's breakdown in isolation from the larger world. In "A Question of Re-entry" (1963), a short story he completed in the year following the Cuban Missile Crisis. Ballard described the fallout of a European astronaut crashing in the Amazon jungle on his way home from the moon. The astronaut survives—temporarily, at least—by winning the confidence of an indigenous tribe in the following way: using nothing more than "a set of tables and a reliable clock." he predicts with godlike accuracy the nightly appearance of an aluminium satellite whose eventual landing the tribe believes will bring infinite material wealth.

Ballard's story brings together multiple themes relating to everything from the more benevolent forms of techno-progressivism to the more sinister manifestations of settler colonialism. There is also a much earlier reference for sculptures like Access and Excel: the work of French caricaturist J.J. Grandville, whose 1844 book Un Autre Monde [Another World] reimagined, among other things, the common items of fin-de-siècle urban living as organic and

crystalline growths. In one of Grandville's illustrations, objects large and small alike multiply like fractal patterns—not just Egyptian obelisks and Gothic spires, but also pencil tips, military medals, dominoes, and dice. Elsewhere, a collection of wigs, fans, hair brushes, feather dusters, and other common items transforms into a coral reef full of iellyfish, sea anemones, feathery tube worms, and other marine life. Grandville's proto-Surrealist visions hark back to the dawn of commodity fetishism; they are a useful reference for Young & Giroux's sculpture because they indicate a path for interpretation beyond the obligatory reference to minimalism, which Young has called "the established language of our generic world."

Minimalism engaged with industrial materials like steel and Plexiglas more than with the commodity as such; and it often made those industrial materials play a subordinate role to phenomenological concerns and tricks of perception, such as the brain's tendency to extract patterns from disordered sensory stimuli. The artists are as interested in details as in forms, especially those practical details that reveal how the forms we take for granted are assembled. like ducts that carry air or rivets that clamp sheets of steel. For philosophers like Walter Benjamin and Giorgio Agamben, Grandville's phantasmagorias commented on the rise of consumerism. In his unfinished The Arcades Project (1927-40), Benjamin linked them to "[t]he enthronement of the commodity, with its luster and distraction," while for Agamben,

they were among "the first representations of a phenomenon that would become increasingly familiar to the modern age: a bad conscience with respect to objects."

Do Young & Giroux have a bad conscience with respect to objects? Probably not—or not in the sense of any "grand polemical enterprise," to quote Giroux. In the 15 years since they began to collaborate, the two artists have deployed various techniques from the worlds of architecture and mass. production, including computer-aided design (CAD) to create virtual maguettes for sculptures and computer-controlled cutting machines (CNC routers) to subtract sections from complex polygonal forms that were at least partly derived through Boolean operations. In a series of sculptures titled Boole, they used the technologies of mass production to make objects whose uniqueness defeated their intended purpose—they were prototypes that would never be manufactured on the production line. The resulting forms look stuck somewhere between the ideal of a clean modernist aesthetics sketched or moulded by hand and the fantasy of a fully automated design done on the computer. In the paired sculptures Umbria & Sienna (2008), for example, wooden tables from IKFA out of which sections have been subtracted by using softwarecontrolled tools become the supports for box-like aluminium enclosures the colour of umber or sienna. Realities collide here: there is a distinct lack of fit between readymade forms and constructed ones, between

hand-drawn designs and computer models, and even between materials like unpainted wood and power-coated metal. In some of the Boole works, IKEA products "terrorized" by savage machine-cuts spill their sawdust guts. In others, monochrome aluminium enclosures seem to grow around them like strange metal flowers from a modernist planet.

2. Questions of Fit

Both the compositional logic of these Boole works and their mode of assembly depended upon this powerful sense of disjunction. but also a sense of discovering connections between systems believed to be unrelated initially. In a series of sculptures first shown at the Carleton University Art Gallery in 2013, Young & Giroux combined the gridlike steel racking systems found in suburban warehouses with transparent glass curtains, or non-structural elements whose individual panes are spider-clamped together and then attached to the structures of the buildings that give urban cores their most recognizable form. Works like Coadaptation (2012), Eunoia (2013), and Chagrin (2013) speak more obliquely to the image of the Cold War-era satellite, which the pair once reinvented as a vaguely minimalist form that felt somehow out of place in the gallery, as if longing to be back in zero-gravity space. To quote one of Ballard's space-age characters, "Never mind [...] the satellite. This cargo actually landed." Late-stage capitalism is often compared to a cargo cult, in the sense that it has failed to deliver a more equitable distribution of material wealth. And yet Young & Giroux's curtain-wall sculptures allude to more than just the modernist spectre of corporate skyscrapers as a literal and metaphorical mirror for late-capitalist alienation. The subtext for these sculptures is the decentralized system for the delivery of very real cargos on a global scale: in other words, the logistics landscapes that spread along the peripheries of urban centres, allowing for consumer goods to travel along highways from factories to warehouses and other distribution hubs connected by the infrastructure.

"You are in your car, driving along the highway, and you see the glass box of a suburban office building and the opaque box of a warehouse," Young has explained, citing a filmic jump-cut to describe the sculptures as a collision between these two common sights. Not for the first time in their collaborative practice, the pair invoked the black box of cinema to describe something that happens in the white cube (or glass box). This time, however, the black box also referred to the horizontally multiplying storage spaces whose contents remain opaque from the vantage point of the road, much like its figurative role vis-à-vis the vertical densities we tend to equate with contemporary urban living.

The individual titles of these works are as evocative as their visual forms. The L-shaped racking structure in *Coadaptation*,

for example, both supports (in the manner of a plinth) and contains (in the manner of a display case) two stacked curving structures dressed in uncoloured acrylic panes on each vertical face. Coincidentally, the word "coadaptation" refers not to the usual model of evolution where only the fittest survives, but rather to a mutual transformation that pulls both parties into a larger system. The glass-clad building never tells the whole story, in other words. The coadaptation of different urban milieus and networks is only understood once the built environment becomes a proper topology, a multidimensional space for the interplay of different social and economic forces. Eunoia and Chagrin both instantiate this topology in similar ways. Standing much taller than the average person, the first sculpture boasts a curtain of blue acrylic panes that would look at home in a city's financial district. As in Coadaptation, these "glass" walls do not trace the contours of the orthogonal frame. Equipped with a support system of their own, they deviate from the grid where more complex shapes are called for. This leaves large sections of the steel racking system completely bare, as if to accentuate the verticality of the blue "glass" structure, or perhaps to suggest its virtual or ideal nature, seeing as it also floats off the ground. A triangular facet that looks sliced from one uppermost corner may be the most striking detail in the work; it completes the aspirational look of an architectural model that. like any corporate skyscraper, must have a variety of reflective planes to compete with

its neighbours. On an ideological level, the transparency of these panes might be taken as communicating not just the fundamental rationality of both the underlying structure and economic enterprise it stands for, but also its honesty. These buildings have nothing to hide—certainly not any financial misdeeds that happen behind closed doors.

The Greek word "eunoia" (εὔνοια) refers to a speaker's cultivation of goodwill in an audience of listeners. As one prompt for interpreting the sculpture's meaning, it evokes an architecture that aims to please, perhaps overly so. The "glass" form in Chargin is less solicitous. Horizontal to Eunoia's verticality, the acrylic component of this sculpture is also darker in colour, and its gentler diagonals play against the latter's crystal-like facets. Along with the distribution warehouse whose contents are fully hidden from view, Chagrin seems to belong in the suburbs, which may account for its less transparent green skin and more box-like forms. Noting the oppositional quality of these sculptures, both in terms of their pairing and the oppositions internal to each one, Canadian art historian and curator Diana Nemiroff has described them thus:

If, from one point of view, [their acrylic skin] recalls how the glass wall was viewed by architects and theorists in the early-twentieth century from both a functionalist perspective of integrating the interior with the exterior and as a symbol of the

transparency and openness of the society that created it, the formal dislocations of the glass structure also hint at how this utopian vision has gone awry.

What strikes me as key in Nemiroff's description is her sense of systems joining together but also coming apart. Young & Giroux's curtain-wall sculptures point to hidden connections between disparate urban formations that co-exist or co-adapt, like suburbs and city cores; yet each is also defined by a pronounced dislocation between the steel racking system, with its prefabricated components and limited shapes that look assembled from a kit, and the reflective superstructure that builds atop the base a whole series of lightweight, increasingly inventive shapes. Thematically, each sculpture exploits the gap between modernism's utopian ambitions and its practical effects.

3. Between sculpture, architecture, and cinema

There is another way to think about this thematic of dislocation in Young & Giroux's work, and it involves linking their sculptures to their films. Recalling Young's image of the suburban warehouse and suburban office tower glimpsed from a moving car in quick succession, film becomes an inescapable reference. The artist, who studied urban geography and grew up in the Toronto suburbs, has also spoken of "the cinematic

experience of driving past these buildings on the highway at 120 km/h." From one angle, to think of this scenario as filmic is to rewrite (or at least annotate) one of the origin stories of minimalism: Tony Smith's night drive along the unfinished New Jersey Turnpike. With the corporeal force of an epiphany, Smith's novel experience of suburban expansion—the emerging logistics landscape, Young & Giroux might call it freed him from any preconceived notions of "natural" pictorial scale. A similar rethinking of a key conceptual bookwork can illuminate certain aspects of Every Building, or Site, that a Building Permit was Issued for a New Building in Toronto in 2006 (2008), which the artists have described as "[a] systematic photography project documenting each site for which a building permit was issued (excluding single family homes) in Toronto (including Scarborough, North York and Etobicoke) in 2006." The 13-minute 35mm film does not consist of still photographs, as that description might suggest, but rather of durational shots. 115 in total, taken in front of each building and projected for eight seconds.

"While making Every Building we went to the cinema every other day and experienced the possibilities of that medium," Young explained in a 2013 interview with Kim Förster. In a 2016 interview, he shared another detail with Robert Enright that better clarifies his understanding of Ed Ruscha's Every Building on Sunset Strip (1966), the legendary bookwork their film invokes.

Specifically, the LA conceptualist "actually shot it with a motion-picture camera and then cut out the frames." as if to repress its origin as a moving image. This secret cinematic quality of Ruscha's "filmed strip" only makes more complex the conceptualist lineage of Young & Giroux's Every Building. The film revealed something that was not apparent at first glance: the hidden totality of Toronto's new builds normally obscured by its ubiquitous condo developments. The filmic staging of these construction projects gave each shot an ambiguous sense of presence that is, arguably, lacking in a standard photo-conceptual work—there is a good dose of uncertainty as to the meaning of each image and its place in the larger (dystopian) typology. What are we looking at, for example, when we see a traditional temple devoted to Swaminarayan Hinduism? Sharing the film strip with all the banal tower blocks, gas stations, liquor stores, and fast-food chains whose building permits were issued in 2006, this temple speaks to another aspect of urbanism unique to multicultural centres like Toronto, whose suburbs reflect the communal practices of various immigrant diasporas.

Every Building also connects to discussions of medium specificity and the post-medium condition. The conspicuously static quality of its shots points to something essential yet easily missed about the relationship between photography and film. Movement in cinema describes its technological support, not the form and content of its image. The

strip of exposed celluloid moves through the projecting device even as the objects on screen remain still. Given all this, it is easy to see why the durational element in Every Building might seem extraneous and displaced. Like the obsolete 35mm motion-picture stock, it could well be a leftover from some other, more utopian mode of viewing—perhaps the kind of viewing that takes place in a darkened theatre and asks for near-total absorption in a narrative sequence.

Something similar happens in Young & Giroux's 50 Light Fixtures from Home Depot (2010). This nine-minute film loop creates the illusion that the projected room is co-extensive with the gallery space as it again delivers on the tautological promise of its title: it alternates between roughly ten seconds of light and four seconds of darkness as generic light fixtures installed on the ceiling of a bare white room flick on and off. What sounds banal in theory reveals, in practice, a world of difference. The light emitted by these fixtures varies in temperature, bathing the room in shades of cooler blue and green or warmer yellow and purple. The colour changes again when one experiences the work not as a 1:1 wall projection, but as a series of stills on a printed page or LCD screen. The products themselves are a representative sample of the hundreds stocked by Home Depot, ranging from exposed fluorescent tubes that recall installations by minimalist Dan Flavin to halogen track lights that transform

the hallowed white cube into a more banal sight: a home undergoing renovation. When a kitschy, crystal-trimmed chandelier appears on screen, enveloping the small room in the dim, yellowish light emitted by candle-shaped LED bulbs, the typological approach gives way to a narrative one, thanks to a set of specifically cinematic associations that link chandeliers to class aspirations.

Young & Giroux's Camera Tracking a Spiral Drawn Between the Two Curved Towers of Viljo Revell's Toronto City Hall (2010) is the most "sculptural" or "architectural" of all three films. Putting the question of apparatus into play by echoing Le Corbusier's famous definition of architecture as "a machine for living in," the artists thought of the iconic Toronto landmark designed by Finnish architect Viljo Revell and finished in 1965 "as a machine for the production of the film," which they also shot on 35mm. A useful precedent here are the sculptural and even architectural films made by British artist Tacita Dean in or near living or abandoned buildings, from a capsule-shaped vacation house in the Cayman Islands to a derelict military installation on the English coast. For art historian Tamara Trodd, what defines these films is a "lack of fit" inherent. in the extension of sculpture beyond the white cube's confines: the sense of displacement around a modernist architecture that never attained its utopian goals: and the displacement of certain "critical structures" that guide the interpretation of projected

images that choose anachronistic film stock over digital media. Similar concerns with what Trodd calls "a layered complexity of filmic time, collapsing futurity and recall," are found in Canadian artist Mark Lewis's Staircase at the Edificio Copan (2014), which tracked a camera's fluid motion down the exterior staircase of a massive São Paulo skyscraper. The differences between this film and that of Young & Giroux reveal much about the duo's intentions, however. While Lewis's camera glided down the Oscar Niemeyer-designed fire escape for the film's duration, Young & Giroux's camera enacted a more complex negotiation of indoor and outdoor space as it made two revolutions, taking its cue from the interplay of multiple elements in a larger structure comprised of two curved towers separated by a domed council chamber. Shooting early or late in the day was not—or not only—the result of an aesthetic choice for the artists. The continuous glass windows behind which they positioned the dolly-mounted camera changed the film's relationship to Revell's architecture, which went from opaque to transparent as shooting progressed: only a shift from day to night could expose what Diana Nemiroff has described as the building's "hive-like interior, virtually indistinguishable from any corporate office building," though filled with government employees.

Recalling the banking tower referenced in *Euonia's* shiny blue curtain wall, the issue of glass and transparency has never been

more fraught. After all, there is no longer an Athenian "agora or a trade fair beneath the open sky," to quote Peter Sloterdijk—only a "hothouse that has drawn inwards everything that was once on the outside." The hothouse simulates a warm climate for the benefit of plants that cannot survive the cold outside. This makes it an apt metaphor for a global economy in which "warming" measures such as bank reserves and stock market manipulations sustain pockets of prosperity in the First World at the expense of the rest. If the interior of capital is the interior of a building sheathed in glass, then the literal transparency of that glass is beside the point. It might as well be a black



- 1. Kim Förster, The Mass Production of Artwork: Christian Giroux and Daniel Young in Conversation with Kim Förster, exh. cat. (Berlin: Künstlerhaus Bethanien, 2014), 16.
- 2. For more on the discursive dimension of these sculptures, see Sarah Robayo Sheridan, "Satellites that Fell to Earth: A Response to Parallel Exhibitions of Work by Christian Giroux and Daniel Young at YYZ Artists' Outlet and Diaz Contemporary," YYZine (2006), np. For more space analogies, see Kenneth Hayes, "New Products of the Sheltered Workshop: A Response by Kenneth Hayes," Critical Distance, vol. 10, no. 1 (2004), np.
- 3. Daniel Young & Christian Giroux, Alouette project description, available online: http://cgdy.com/?page_id=5&id_slideshow=23# [accessed February 28, 2017].
- 4. For more on how theorists and artists like Guy Debord and Constant Nieuwenhuys defined "unitary urbanism," see Simon Sadler, The Situationist City (Cambridge, Mass.: MIT Press, 1999).
- 5. J.G. Ballard, "A Question of Re-entry [1963]," in The Complete Short Stories: Volume 1 (London: Harper Perennial, 2006), 617.
- 6. Robert Enright, "Collaborative Aspirations: An Interview with Christian Giroux and Daniel Young," Border Crossings, vol. 35, no. 2 (June 2016), 83.
- 7. Walter Benjamin, "Paris, the Capital of the Nineteenth Century < Exposé of 1935>," in The Arcades Project, trans. Howard Eiland and Kevin McLaughlin (Cambridge, Mass. and London: Harvard University Press, 2002),
- 8. Giorgio Agamben, Stanzas: Word and Phantasm, trans. Ronald L. Martinez (Minneapolis: University of Minnesota, 1993), 47.
- 9. Förster. The Mass Production of Artwork, 54.
- 10. For a discussion of "disjunction" in the curtain-wall sculptures, see Diana Nemiroff, "Models for Thought," in Y & G #12 (curtain walls), exh. cat. (Ottawa: Carleton University Art Gallery, 2014), np.
- 11. Ballard, "A Question of Re-entry," 620.
- 12. Förster, The Mass Production of Artwork, 53.
- 13. As Canadian architect George Baird has observed, "[Chagrin] carries clear connotations of luxurious suburban business parks, [Eunoia] of downtown banking towers." George Baird, "Architectural Analogies in the Work of Young & Giroux," in Y & G #12 (curtain walls), np.
- 14. For a discussion transparency in relation to these sculptures, see Nemiroff, "Models for Thought" and Baird, "Architectural Analogies in the Work of Young & Giroux," both in Y & G #12 (curtain walls), np.
- 15. Canadian poet Christian Bök's Eunoia (2001) has come up in discussions of the work's title. Where Bök used only one of the five vowels in the word "euonia" in each chapter, Giroux and Young dealt with other kinds of restrictions. On this, see Enright, "Collaborative Aspirations." 81.
- 16. Nemiroff, "Models for Thought,"
- 17. Förster, The Mass Production of Artwork, 33. In some of Young & Giroux's sculptural projects, there are hints of cinema's structural relations, even without the technical apparatus to enable those relations. Seen from afar, the Boole sculptures Umbria and Sienna vaguely resemble analogue film projectors mounted on tables, for example.
- 18. Samuel J. Wagstaff Jr., "Talking with Tony Smith." Artforum 5 (December 1966), 14-19, Reprinted in Michael Fried, "Art and Objecthood [1967]," in Art and Objecthood: Essays and Reviews (Chicago: University of Chicago Press, 1998), 157-58.
- 19. Young & Giroux have paid homage to Smith's work in their sculpture Mr. Smith (2011). The basic permutational structure here consists of four triangular faces that can take negative or positive form, depending on whether the assemblers insert triangular plywood panels or laminated plywood struts into the cast-aluminium joints. In the artists' hands, the "spatial matrix" envisioned by Smith as the foundation of his modular sculptures is no longer a self-contained system, but rather one grid among many.
- 20. Daniel Young & Christian Giroux, project description of Every Building, or Site, that a Building Permit was Issued for a New Building in Toronto in 2006, available online: http://cgdv.com/?page_id=5&id_slideshow=11 [accessed February 28, 2017].
- 21. Förster, The Mass Production of Artwork, 24.
- 22. Enright, "Collaborative Aspirations," 84.
- 23. For more on this tension between movement and stillness, see Victor Burgin, The Remembered Film (London: Reaktion, 2004), 24.
- 24. Le Corbusier, Toward an Architecture [1924], trans. John Goodman (Los Angeles: Getty Research Institute, 2007), 151.
- 25. Dan Young & Christian Giroux, project description for Camera Tracking a Spiral Drawn Between the Two Curved Towers of Viljo Revell's Toronto City Hall, available online: http://cgdy.com/?page_id=5&id_slideshow=28# [accessed February 28, 2017].
- 26. Tamara Trodd, "Lack of Fit: Tacita Dean, Modernism and the Sculptural Film," Art History, vol. 31, no. 3 (June 2008), 382.
- 27. Trodd. "Lack of Fit." 374.
- 28. Nemiroff, "Models for Thought," np.
- 29. Peter Sloterdijk, In the World Interior of Capital: For a Philosophical Theory of Globalization, trans. Wieland Hoban (Cambridge: Polity Press, 2013), 8.