Disordering the Establishment

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In 1966 the Groupe de Recherche d’Art Visuel (GRAV)—an art collective made up of Horacio Garcia-Rossi, Julio Le Parc, François Morellet, Francisco Sobrino, Joël Stein, and Yvaral—loaded up a cargo van with a collection of their sculptures and modified body accessories and set out on a day-long tour of Paris. A map that they distributed to passersby marked out the major pedestrian hubs clustered around central Paris where the artists would stop, while drawings of stick figures, hours, and explanatory texts progressed clockwise around the perimeter, illustrating the participatory exhibitions that they would set up like obstacles in a board game. The reverse side of the map provided a history of the group and explained that in a city “woven by a network of habits rediscovered every day,” “the sum of these routinized gestures can lead to total passivity” that they wished to displace with a “series of deliberately orchestrated punctuations.” This sequence of events, titled *A Day in the Street*, resonated with contemporary international happenings and performance art in that it was ephemeral, loosely scripted, participatory, and with countercultural actions in public space that sought to disrupt automated behaviors and unify fragmented spatial perceptions while critiquing the hegemony of the (art) Establishment. The cartoonish illustrations and the inspired, but plainly stated declaration solicited the nonspecialist audience in their effort, as they explained, “to
create a new situation” that overcame not just the habitual everyday of city living, but also the art-world routines of “more or less enthusiastic specialists and a vast indifferent public.”

Importantly, however, the GRAV’s street action differed from others of its era in the way that it ambiguously reproduced the Establishment’s techniques. For example, the artists distributed a questionnaire that resembled in equal parts the sociological inquiry and the marketing study that the public had grown accustomed to in recent years. “You are perhaps a member of what one calls the general public,” the questionnaire addressed its audience. “Could you respond to several questions in order to help define the relationship between art and the general public?” The questionnaire posed scenarios that were apparently straightforward, yet the multiple-choice responses that they offered humorously undercut any single-minded goals that such a questionnaire would be primed to posit. Instead, the multiplicity pointed to art’s cultural overdetermination. “Modern art such as one finds it in the salons and art galleries,” they suggested, is it: “interesting,” “indifferent,” “necessary,” “in-
comprehensible,” “intelligent,” and/or “gratuitous”? On the surface, the artists’ goal was to discover public attitudes to contemporary art, that audience’s self-perception as audience, and the contexts that it understood to be appropriate to art viewing. Rather than directing a particular type of relationship to art, it engaged the possibility that one could see modern art as having more or less personal appeal, social purpose, an internally produced critical apparatus, and/or no worth whatsoever. The options were not of a kind, and their heterogeneity refused assumptions about the respondents’ predispositions. Rather than honing opinions and categorizing populations, the artists’ questionnaire highlighted a central, yet unstated and overlooked, tension in their work: a conflict that the artists routinely staged between the democratic ambition of their participatory displays and the technocratically rationalized structures of contemporary society. Indeed, while the GRAV participated in the period shift from phenomenological investigations of individual experience to structural critiques of social and cultural power, it did so via a slanted embrace of the cybernetic and information science that provided the technological arm of post–World War II spectacle society.

*A Day in the Street* is the work for which the GRAV became best known—likely due to the way that it fits into a dominant history of advanced post–World War II artistic production—yet this street action and the questionnaires that the group distributed developed a line of social and institutional critique that the artists had been pursuing independently since the mid-1950s. The apprehension of the unsuspecting viewer in the street and the play between order and disorder in the questionnaire’s open-ended organization resembled the optically illusive paintings and sculptures whose apparently simple gridded structures would warp before the viewers’ eyes into ambiguous constructions without clear points of focus. Artworks, such as Joël Stein’s 1959 painting *Squaring the Circle*, seemed to reveal their own constructions even as they melted into illusion. Built from basic Euclidean forms, Stein’s painting referenced the famously impossible ancient mathematical problem of deriving a square from a circle using only compass and straightedge, with the result that the circle and resulting square would be equal in area. Compass and straightedge are indeed the tools that Stein would have used to compose his canvas, which he divided into four quadrants, each containing nested squares representing eight colors progressing from yellow through orange to deep red, and back again. The straight, clean lines and precisely progressive values allow for a transparency of construction, yet the composition creates illusions of volume and pulsation, as the center appears to bulge into the viewer’s space, and flashes of lighter yellow pull the eye to the canvas’s corners. Rather than using
mathematical laws to perform the transformation, Stein appeals to the viewer’s eye to imaginatively visualize the circle whose curved perimeter line would pass through opposing angles of the nested squares and reveal the meaning of the title. If squaring a circle is mathematically impossible, metaphorically Stein’s painting describes how illusion may emerge from the geometric limitations that it contains. Moreover, by calling on the eye to perform the paradoxical title, the painting insists that viewers consider their own processes of viewing as they attempted to visually anchor the work. The work does not exist in an abstract mathematical space; rather, it is an object that demonstrates its relativity by depending on its relationship to an active viewer (see plate i).

The GRAV understood its project as one of social engineering within the context of the art world. The systematic approach that they took to their work closely resembled the technocratic spirit of the postwar era in its efficiency, its tendency to create homogeneity for maximum combinatorial and interchangeable possibilities, and its objective of creating general cultural progress. They adapted the technocratic spirit of its time to a purely visual set of “research” propositions that critiqued cultural institutions by redistributed authority between the artist and their audience. The relationship between rationalized formal structures and the public is indeed one of the central ways in which the GRAV’s relationship to technocracy takes shape. Writing in the wake of the student movement of 1968, Alain Touraine considered the form of government that had come to prevail under de Gaulle in terms of its relationship to society: “Technocracy is power exercised in the name of the interests of the politico-economic production and decision-making structures, which aim at growth and power and consider society to be only the collection of the social means to be used to achieve growth and reinforce the ruling structures that control it. On the deepest level,” he continued, “the student movement is antitechnocratic.” While France streamlined in the postwar “years of speed” in order to reestablish its cultural identity in an increasingly internationalized art market, the artists’ seemingly contradictory goal was to promote structural social cohesion through phenomenological instability. This physical transmutation of the regular progression of forms into visual instability such as in Stein’s Squaring the Circle echoed the procedural reversal their work provoked through a number of counterintuitive twists in a logical progression of effects: programmed objectivity allowed for interpretive openness; destruction of the subjective authorship of the artist promoted the sympathetic engagement of the spectator; and the technocratic organization of production led to a democratic viewing experience that called for participation, communicative feedback, and the self-definition of the viewers as a community.
The cool, repetition-based regularity emblematic of GRAV’s works embraced an international geometric abstraction that stood in stark contrast to what the artists saw as the stagnating expressionisms and figurations of the French art scene. In 1961, on the occasion of the second Paris Biennial, the artists published a tract titled “An End to Mystifications” in which they outlined the fundamental flaws with art from across Paris’s aesthetic and political spectra. The minister of culture, André Malraux, had established the Paris Biennial in 1959 with the goal of securing the city’s standing in the international postwar art world. His strategy involved staging exhibitions highlighting the works of artists who were under thirty-five years old at the time alongside exhibitions of artists who were under thirty-five during earlier decades going back to the nineteenth century. This curatorial strategy may have reminded visitors of the ongoing relevance of France’s historical avant-garde, yet for the GRAV it signaled the “subjugation of ‘Young Painting’ to recognized painters” and “the fecklessness and lack of awareness among exhibitors and organizers alike with regard to the real facts of life affecting people in this day and age.” Beyond the biennial, they highlighted the aesthetic homogeneity that spread across contemporary art salons that promoted irrelevant values, including emotion, cultivated viewership, and a preference for the unique work of art. In this context, lyrical and tachiste expressionisms typical of the art that dominated the School of Paris took on the quality of platitude as they became ossified in continual repetition that was already being reproduced by the next generation. Despite the visual dynamism of much of the abstract painting produced in France in the 1950s, the GRAV observed the prevailing art’s culturally stabilizing function as it reproduced values that called for art to be the definitive and irreplaceable product of an “Inspired Artist.” One might, furthermore, observe the irony that the conservative authority and authenticity that such gestures conveyed was delegitimized by the fact that the indexical mark that was supposed to register the unique event of creation was devalued by the sheer volume at which such works were being produced for the salons.

However outrageous some contemporary art may have been, it did not do enough to refashion art since it failed to undermine the concept of the artist him- or herself. Describing the relationship between the artist and society as one of “mystification,” their analysis of the problem was typically Marxist. They highlighted the social and economic aspects of the relationship so as to identify the resulting works as products of commodity fetishism. As they saw it, there was a general overestimation of aesthetic and anti-aesthetic concepts that were seen to be the product of a unique artist’s vision, which could be sold to an elite audience in a market that appraised artworks based on their abil-
ity to generate profit. The relation between the artist and work, or audience and work, was corrupted by the influence of the concept of prestige such as it overtook and replaced any other significance that one might imagine to be the province of the artwork itself. For the GRAV artists, one of the ways in which prestige manifested was through literary or historical reference that would be understood by a spectator who had privileged access to an intellectual interpretive apparatus external to the art object. Reference, as exercised by the viewer, was intrinsic to the mechanics of commodity fetishization in which relations between objects replace relations between people. In the case of art, references between artworks replace the immediate and candid experience of the viewer before the object. The group’s attentiveness to the pitfalls of mystification furthered its conviction that it was necessary to bring the spectator back to an experience that would rest uniquely in the visual domain, or, as the group put it, they wanted to make work that would appeal exclusively to the “human eye.” This would universalize access, making all viewers equal before the work, while eliminating recognizable forms—be they idealizing classicism, cubist syntheses, or the free forms of art informel, or others. To the perceptual “instability” of the optical or kinetic artwork, the artists added the interpretive instability of an object that refuses to settle into a recognizable narrative.

The GRAV’s polemically reductive perspective on art in France at the beginning of the 1960s is a reflection of the degree to which geometric abstraction was cast as an antithetical artistic approach in the years after World War II. In reality, as Serge Guilbaut has observed, the School of Paris during this time was divided into “a mosaic” that fractured along political lines. In the years immediately following the war, the French Communist Party rejected the validity of abstract art, leading many young leftists to fill their salons with socialist realism, while critics promoting abstraction privileged lyricism over geometric regularity, attacking the latter as inappropriately cheerful and decorative for their “apocalyptic age.” France promoted the work of numerous artists of the historical avant-garde who were instrumental in the development of geometric abstraction—notably the cubists, purists, and those associated with the short-lived constructivist association Cercle et Carré—yet in the years following World War II, energy behind the movement came from artists whose sources were conspicuously international, many of whom had recently emigrated. The most established of them was Victor Vasarely, who had moved to Paris from Budapest in 1930 and is widely credited with being the progenitor of Op art. In 1939, Vasarely met Denise Bleibtreu, a small-store owner who came from a family of leftist art collectors, and five years later she and Vasarely converted her store into a gallery. In 1955 the Denise René Gallery—which
championed the work of Op artists and would go on to give the GRAV its first show—held the landmark kinetic exhibition *Le mouvement*. This show is frequently credited with “introducing” France to kinetic art, although it did so by showing that kinetic art was an already-familiar entity, and by questioning the supposed categorizations that would separate it from more mainstream forms. The intergenerational roster of artists included Marcel Duchamp, who was not primarily known as a kinetic artist, and the catalogue included an essay by Jean-Paul Sartre that exalted the inspiration of Alexander Calder’s mobiles and, in so doing, breached the supposed divide between expressionist art aligned with existentialism and supposedly vacuous geometric abstraction, which was here represented as a form of kineticism. In this context, then, the exhibition also introduced the social mission of this work in publishing Vasarely’s “Notes for a Manifesto,” which called for a “spatial” abstract art, the motion and duration of which would generate a sense of “presence” that would be accessible to all audiences, regardless of their access to specialized arts education. This art would be a “common treasure” that, in his words, would “hold happiness for us in the new, moving and touching, plastic beauty.”12

During the mid-1950s, “optimism” began to appear in manifestos and critical essays praising the artworks of an international gamut of young artists who were looking to move past the horrors of the war and imagine a better future. Attempting to define the ethos of this new historical period, art critic Pierre Restany exemplified the spirit of optimism. Promoting work of the GRAV, among others, Restany argued that artists of the era “revivified confidence in Man through Science and Technology” and intended “to participate organically in the continual elaboration of a new world order.” The new “humanism of intelligence,” as Restany put it, was essentially rational with “its superior values of control, of adaptation of consciousness.” As artists abandoned the interior, egocentric visions of the world that they had inherited from Romanticism, they would embrace “dignity” and “efficiency” in order to “assure the happiness of the man of today.”13

Technological idealism drove the projects of many artists, critics, architects, and urban planners from the postwar era as they gathered into multidisciplinary teams with the goal of merging plastic activity with a “techno-scientific social basis” that would prospectively create the world of tomorrow today.14 Such was the case with the German-based transnational group of artists associated with the ZERO network, whose optical and kinetic sculptures incorporated materials of the consumer world in order to create telegenic perceptual experiences and audience participation. Group N and Group T, both communist collectives from Italy, concentrated on Op art and
immersive installations that called attention to the experience of space and time on the perception of the viewer. In Croatia, a multidisciplinary group called Exat 51 undermined the division between fine and applied art by adopting a constructivist-inspired abstraction to counter officially sanctioned socialist realism. Beginning in 1961, artists from each of these groups began convening for the New Tendencies exhibitions in Zagreb, which extended the project of Exat 51 by promoting “research”-based art for the computer age. After exhibiting in the first two New Tendencies shows the GRAV members took a hiatus from associating with the work of their peers. Le Parc penned a sarcastic manifesto criticizing the organizers of New Tendencies for their vapid academicism and lack of program. The GRAV’s own work, in contrast, was governed by a rigorous set of principles designed to reinforce the collective ties of the group to each other and to society, which he illustrated by adumbrating his vision of A Day in the Street that the GRAV would carry out two years later.

Before the GRAV formed, however, its members had absorbed messages linking geometric abstraction and social change from a range of sources. Garcia-Rossi, Le Parc, and Sobrino attended the School of Fine Arts in Buenos Aires together, where they took classes with Lucio Fontana during the period in which he was working on his “White Manifesto” (a text that calls for a new art form committed to technological perceptual experience). Le Parc has highlighted the influence of artists descended from the Mexican muralists who were living in Buenos Aires at the time, as well as the importance of museum exhibitions that introduced them to Vasarely and the Marxist abstract painters of Arte Concreto-Invención. The latter group linked its De Stijl–influenced geometries to explicit political stances that presage those of the GRAV. Declaring its alignment with the Soviet Union, the group stated that Invenciónismo worked “against fiction through the inventive act” and was committed to the liberation of mankind as it affirmed “his control over the world.” During this time, Le Parc and Garcia-Rossi participated in the Students’ Movement, and Le Parc took a leading role in upending the school’s administration. Between 1958 and 1959 the three moved to Paris to seek the center of the art world. It was there that they met Vasarely, and through him, the artists that would make up the GRAV.

During the same period, the French artists independently cultivated a preference for geometric abstraction via a similarly international set of references. Morellet traces his interest in geometry back to the Islamic decorative motifs that he saw on a visit to the Alhambra, and to Max Bill—the Swiss artist and founder of the Ulm School of Design in Germany—whom he encountered while living in Brazil briefly during the early 1950s. When Morellet returned
to France, he extended his network of artist friends and professional contacts. He traveled several times to Ulm to meet with Bill and Argentine Tomás Moldonado; he also befriended the Paris-based Americans Jack Youngerman and Ellsworth Kelly, and eventually Venezuelan Jesús-Rafael Soto, Vasarely, the Hungarian artists Vera and François Molnar, and Stein, who had recently completed his studies at the School of Fine Arts in Paris and was frequenting the studio of Fernand Léger.

The GRAV artists united around the Molnars, who in their art and writing pursued a programmatic mode of art production that entwined cybernetics and Marxist politics. As Jacopo Galimberti has shown, the Molnars read and passed along Georg Lukács’s *The Destruction of Reason*, which was an important text for the GRAV as well as other artists associated with the Denise René Gallery.\(^1\) Lukács opposed bourgeois subjectivism and irrationality to dialectical thought, a binary that appealed to the artists who were pursuing what they considered a purely rational mode of art production amid an irrational mass of ego-driven splotches. On the occasion of the second New Tendencies exhibition in 1963, Molnar and Morellet elaborated on the scientific clarity of Marxist methodology in their essay *For an Abstract Progressive Art*.\(^2\) They defended abstraction against the prevailing popularity of figurative art among French communist artists and Lukács alike, and argued that abstract art was not opposed to the principles of dialectical materialism. Specifically, they addressed the theory of reflection in which consciousness “reflects” the material world. Whereas capitalism produces a false reflection of material reality and therefore false consciousness, art, Lukács argued, could have a consciousness-raising, or “defetishizing,” effect by allowing viewers to reexperience the world beyond the immediate appearances of everyday life.

Molnar and Morellet proposed updating this theory by rethinking it according to “topology,” a branch of mathematics that served as a popular metaphor during the 1960s, in particular for those working at the intersection of art and science or engineering.\(^3\) The artists argued that the one-to-one correspondence between world and image that the theory of reflection proposed could be rethought according to flexible topological equivalencies in which circles could be contorted into squares as long as the points between them retained a one-to-one relationship. The artists’ use of the term “topology” was itself flexible, however. They used it to argue that abstract forms such as music or painting could “reflect” the world without resembling it realistically, and they used it to describe accords between forms and disciplines such as music, dance, and architecture—or, as they would carry this out in their own artwork, painting, sculpture, and wearable devices. Most importantly, the idea
of topology allowed the artists to imagine a progressive abstract art based on rational, experimental, interdisciplinary processes. “Progressive art,” as they specified, would model itself on scientific research, would seek adaptations in architecture and urbanism, and would have active participation of the spectator as well as collective criticism. Topology echoes through the progressive series of logical maneuvers that the artists carry out in the essay as it explains their escape from material or disciplinary specificity, as well as their expanded understanding of art’s place in society.

As Molnar and Morellet suggest, perception would be the glue to hold the twist of topologically related disciplines and forms together. Citing French information theorist Abraham Moles, the artists argued that experimental art “fixes goals tied to communication; it recognizes that consciousness and the pleasure of the public in its totality are necessary.” But from where would this consciousness come? Seeking to establish a properly Marxist material basis, they concentrated on the object itself and its relationship to perception, employing a diagram from Charles W. Morris’s 1938 monograph, *Foundation of a Theory of Signs*, to illustrate the concept. In the diagram, three concentric bubbles shaded with lines represent the first visible object itself (an artwork, for example), then the perception of the object, and finally aesthetic appreciation. With the visible object at the core, perception overlaps and exceeds it, and aesthetic appreciation similarly overlaps the object and perception of it, yet extends beyond them both, so that the object, perception, and aesthetic appreciation are, all three, mutually inflected. The artists recognized that perception is influenced by psychological and social factors, and they believed that by making perception the central issue of their art production they would be able to create works that extended beyond the object itself and into the space of “the public and its totality.” The perceptual and discursive circulation of the art object took form in a “cycle of actions” diagram that they used to illustrate their vision of the relationships between artwork, creator, society, and spectator. In it, direct and reciprocal relations communicate between all nodes except artwork and society, which can only be connected via the intermediary of the artist or spectator. The diagram highlighted the role of human actors and, in turn, demonstrated the importance of viewer perception.

Recognizing that cultural conditioning causes some images to be more perceptible to spectators than others, the artists aimed to produce works that would be universal by not producing familiar images. They turned to Gestalt exercises as scientific demonstrations of forms, believing their ambivalence to exceed cultural influence. Gestalt therapy attempts to improve a subject’s contact with his or her community through perception by highlighting awareness
of differences and similarities between forms while exploring the interruptions between them. It points up exactly the indeterminate nature of relations between shapes in order to focus on perception as key to the way that the subject is integrated into his or her environment. In this way, Gestalt affirmed the artists’ conviction that perception is the basis of any theory of knowledge.23 Like the figure-ground reversals that make either a black or white cross emerge from a divided circle, or the reversible perspective drawing of Schrödinger’s stairs that appear to either ascend from a floor or descend from a ceiling, Morellet saw his own *Network* paintings, in which black lines intersect as they traverse white grounds, as independent of cultural conditioning. Like the circle that emerged from Stein’s nests of squares in *Squaring the Circle*, the overlapping superposed fields of black parallel lines on a white ground of Morellet’s *Doubles Grids 0°-22°-45°-67°* (1958) creates the impression of smoothly curved, bursting rosettes. The reason for this illusion, the artists observed, is that physiological limitations prevent the eye from being able to accommodate every point in a field simultaneously. In so doing, Morellet’s painting extends the either/or perceptual ambivalence of the Gestalt exercise to visual fields in which points of center and periphery constantly chase across the surface, and the visual object at the center of Morris’s diagram erodes the barrier that separates it from the viewer’s perception.

With Bill, Gestalt acquired a second meaning specific to the production of the visual environment. Bill used the term to describe the motivated relationship between function and appearance in technologies ranging from stools and clocks to machine components. Modifying the famous Gestalt maxim of psychologist Kurt Koffka that “the whole is other than the sum of its parts,” Bill argued that “*gestalt* is the sum of all functions in harmonious unity,” a harmonious unity that he referred to as “the good form.”24 These were forms that did not exceed the functionality of the object, but emerged from that functionality and expressed it perfectly. For Bill, “good” was a moral issue as much as a question of taste. In opposition to the “misguided extravagance” that he associated with upward mobility, the good form was “true,” “sincere,” and “unostentatious.”25 It was based on “quality” and “good value” that would make “beautiful” products available to a mass public. More than an object, the good form also demanded a specific mode of production. Bill imagined that the attractiveness and usefulness of these objects would be guaranteed by a scientific rationality under which “built-in safeguards, as in technology” would prevent the designer’s “personal taste and abilities (or lack of them)” from corrupting the balance of naturally according elements. The rationality of the design would guarantee that the object would be relevant to its era.
Just as the forms of technologies are produced from advanced knowledge in order to serve their period-specific functions, so the research and development that determined the good form would guarantee that it always responded to the current needs of its social context. In its scientific modes of production and democratic ambitions, Bill’s good form was a socio-aesthetic model for the GRAV’s artistic ambitions.

The future GRAV artists, however, judged that the artworks of Bill, Vasarely, and others of their generation were overly determined by artistic intuition and therefore not dissimilar enough from those of the expressionist painters. Passages in some of Vasarely’s canvases and Bill’s uses of color did not conform to the established program of absolute control that the artists took as central to the replacement of artistic authority by mechanical, disinterested scientificity. In 1960, several of the artists exhibiting together as a group calling itself Motus declared their opposition to what they perceived to be the false claims of lyricism, and stated that they were “against personality.” Not without their own colorful flourish, however, Motus adopted as its motto “motus et bouche cousues,” or, roughly, “keep it under your hat.” This invitation to secrecy playfully resonated with the anonymity of the artists who declared themselves to be “more a group of paintings than a group of painters.” The development of an anonymous style meant reducing their paintings and sculptures to programmatically determined, coolly executed studies in objectivity. Abstract, gridded canvases, often in the black and white of Gestalt exercises, were insistently self-referential and squeezed out any potential room for the subjective expression of the artist. In reducing their own subjective import, the artists’ pared-down geometries sought to eliminate affective responses on the part of the audience just as their works would reject their own emotional impulses.

Technocratic Aesthetics

In July 1960, Motus regrouped with several new members to form the Centre de Recherche d’Art Visuel (which six months later would evolve, yet again, into the GRAV) and printed an “acte de foundation” that they branded with a logo, the design of which succinctly communicated the group’s approach to elaborating visual possibility through basic, systematic alterations of black and white, square and circle. The document spelled out nine stratagems that the center would use to unify their plastic activities and discoveries so as to generate a constant movement of ideas and ensure that no one individual would be responsible for his own work or that of the entire group. The criteria by which each individual was considered to be a valuable member of the group
became more objective as they attempted to overcome the “traditional attitude of the unique and inspired painter,” replacing this figure instead with individuals whose research, organized and supported by the group, would, little by little, constitute a solid theoretical and practical basis for the center. At the same time, working together would develop individual capacities as individual questions were to be submitted to the group, which would then work together to find solutions for the individual artist. Each discovery generated through the combination of individual research and collective problem solving would then create a point of departure for each member. The formal strategies of “approximation, combinatory possibility, statistics, [and] probability” that the artists adopted to conceive their experimental works then also served as the principles by which they would efficiently organize their collective research.

The artists would classify the research projects according to their origins, objectives, the relations existing between them, and their possible contradictions, and archive them in order to advance “progress in the art of rational decision making.”

Considering the objects that they produced not as finished artworks, but rather as research, they conceived of their process as a continual progression based on trial and error. As in a scientific experiment, or in a process of communication, the intention of a piece may have been successfully conveyed by translating it into concrete form, or it may have failed completely, thereby generating new questions to be examined through more experimentation. This can be clearly seen in the development of the GRAV’s work over a period of a little more than a decade. Their initial abandonment of arbitrary choice for rational progressions of forms then evolved into an embrace of the perceptual instability present in such forms, which then became the creation of environments. Each step along this progression produced an increasingly active role for the viewer. The evolution of the forms and their relationship to their public show that, at each juncture, the artists observed the visual effects of the range of objects that each member in the group was producing, that they identified the causes of those effects and then elaborated on them in the next step of a continually evolving process. The group’s guidelines so closely resemble the technocratic language of the era that they could have served as the blueprint for the procedures followed by captains of industry.

More than just a form of power efficiently pursuing progress, technocracy itself, as Henri Lefebvre noted, had become an aesthetic in 1960s France. Technological advancements defined some of the most significant changes of the era: the development of cybernetic technologies, the increasing influence of engineering and science on policy, the rigorous systematization of the social
CHAPTER 1

sciences and philosophy all coincided with a new period of economic affluence that changed daily life by putting refrigerators and televisions in the homes of the expanding middle class. With the advancement of techno-consumer society, the figure of the technocrat took on popular appeal as a modern hero. The technocrat used technological knowledge to discover rational solutions that would respond to precise problems that were discovered through practical experimentation. Using economics and engineering to unify a society that no longer formed what Lefebvre referred to as an organic, “spontaneous totality,” the technocrat became the model for the reigning ideology that fetishized coherence in form and structure. For these reasons, critics expressed concern that media messages were determined by a faceless elite that controlled the transmission of information, and consequently determined the character of the public sphere. “The technocrat is very much in style today,” remarked journalist André Toulemon. “We don’t know him personally, but we hear speak of him at every moment, we express his ideas, his projects, his plans, his directives.” Yet whereas the opinions exerted by such anonymous actors created a sort of stability, it was understood to be essentially deceitful, as the goals of technocrats were self-serving: “If political power is weak, it is the technocracy that governs. But what is technocracy? A sort of feudalism?: groups supported by their banks, men of certain ‘bodies’, of certain activities trying to make politics evolve in the direction that is most useful to them. . . . A president, at least, one can change! (?) But one does not change the Council of State or the Inspector of Finance or the directors of banks every four or seven years.” Perhaps most importantly, however, technocratic stability was seen as capricious as it failed to fundamentally represent the concerns of an electorate. Whereas the control of information by a social elite would appear to create stability, its ultimate effect would be the opposite.

On the eve of the 1965 presidential elections that would grant President de Gaulle a second term in office, traditionalist center-right politician Raymond Boisidé was sufficiently concerned by the shift from political contest to technocratic rule that he published his book *Technocracy and Democracy*. The effects of technocratic information control in the early Fifth Republic had observably insidious effects. Boisidé noted that amid otherwise relevant debates between liberals and statists as to the virtues of individual competition and collective cooperation, one could not neglect to notice that those who truly held the power were the technocrats to whom modern society faithfully subjected itself. While during the German occupation and in the years just following World War II, citizens had actively imagined the civilization to come, Boisidé notes that during the early 1960s, political indifference began to smother popular
politics. By March 1968 the melancholic lack of engagement with the strife of the poor and oppressed had become sufficiently stifling that journalist Pierre Viansson-Ponté wrote in a prognostic and widely cited *Le Monde* article, “what currently characterizes our public life is boredom.” Socialism and capitalism, Boisde argued, no longer formed the basis of political contestation as each had lost its ideological focus to become simply a technique of economic progress. “The only modern debate,” Boisde went so far as to suggest, “is the choice of a ‘political system’—that is: of the organization of powers. . . . Technocracy or democracy?” Whether private or national, whether in France, the United States, or the Union of Soviet Socialist Republics, the health of enterprise in the postwar era would mean that society at large as collectivities of workers, equipped with materials for the purpose of producing economic results, had come to form a social entity. Regardless of their social function, they all shared the common basic objective of surviving in a rapidly evolving society, oriented with a “prospective” attitude toward the future. They resembled less a grouping of people with shared goals—such as liberté, égalité, or fraternité—than a machine driven toward economic prosperity.

For Boisde, the dominance of the technocrat was not at issue. Rather, the question was how to avoid oppressing citizens under the authority of those who organize the social effects of constantly changing technology. Integrating workers into the collectivity of a workforce would become as important a goal as guaranteeing the participation of a sovereign people in the realization of their destinies. Yet he understood technocracy and politics to be ultimately opposed, the machinery of modern life producing a taste for leisure and distraction at the same moment that specialization made economic and international affairs opaque to the greater public. Lack of interest in political action, Boisde noted, posed a “humanist” problem that required an antidote against the poisoning of strictly material preoccupations. Where technocratic experts make the decisions that create a homeostatic society, politics increasingly falls within the purview of high culture, the greater population loses its taste for political action, and politics becomes separated from the human beings that compose a society. Like Boisde, Lefebvre noted the disturbing contradiction between the rise of technological society and a simultaneous drop in social engagement as the population became enraptured by consuming the signs of technological advancement while delegating their political investments to a technical elite. In point of fact, Lefebvre argued that more than anything, it is the image that the technocrat gives of himself that is most toxic as he provides the impression of a rationalized society that is largely incoherent. Having turned its space-aged gaze toward the stars, Lefebvre notes,
society had lost its ability to focus its scientific capacities on the impoverishment of life on earth. “It is clear that the old term ‘alienation’ (religious, ideological, political), is too weak to characterize this situation at once monstrous and normalized, intolerable and tolerated, crushing and imperceptible.” In a culture in which lobbies have replaced a politics interested in the well-being of its citizenry with a politics that promotes the sale of cars “we quickly observe,” Lefebvre wrote, “that the crisis of ‘man’ and of humanism is first of all practical.”

In order for technology to have a positive role, it would have to be in the service of politics rather than the other way around.

In this context, the claim of Otto Hahn—a critic friendly to the GRAV’s pursuits—that Le Parc wanted to be “a technocrat of painting” betrays a tinge of condemnation. Amid the alienation that Boisde and Lefebvre described, Hahn’s preference for clear “meditations on culture” or the “definition of new problems” makes sense. While the GRAV’s elimination of the personality of the artists in favor of group anonymity adopted the effects of a technocratic aesthetic, however, I argue that they did so in response to “new problems” posed by the culture in which they found themselves. In order to produce an advanced art appropriate to the competencies of a technologically advancing society, they embodied its ways of seeing. In their historical context, the group positioned the affective neutrality of their compositional programming as a radical innovation. In a short television documentary from 1962, the artists responded to a public whose questions and accusations dramatize contemporary reactions to their work.

Morellet defends the group against the claim that they are not a real avant-garde but only the prolongation of a kinetic art movement that began forty years earlier by arguing that what is different about their work is precisely its attention to programmed process. Stein and Morellet take in the respondents’ sometimes aggressive enthusiasm with surprise, pointing out that their goal was not to generate violent opposition. Citing other movements of the postwar era, Morellet noted that the GRAV was not trying to do something new, and that they realized they were surpassed by pop art that orchestrated and commercialized scandals that blended advertising with fecal matter. While the avant-gardes of the 1950s incited violent reactions from their audience through works that shocked the public with an anti-aesthetic of nudity, abjection, and references to nihilistic violence in order to rebel against the postwar return to order, the GRAV’s relatively conventional production of painting and sculpture attempted to restore their audience to a posture of calm contemplation. As Morellet put it, they were trying to regain the interest of a disoriented and exhausted public. In contrast to artistic attempts of the previous decade that sought to catch their spectators off-guard
by assaulting them with events that expressed the artist’s social critique, the GRAV developed an aesthetic of self-evidence.

The artists composed a visual program that produced a sort of mechanical aesthetic. Explaining the process for “establishing” (rather than “painting”) one of his canvases, Joël Stein explained to the TV audience, “one departs from a mathematical framework, rigorously drawn in the beginning, and in which each element is controlled, numbered, each one of the forms has a color that is attributed in advance, and this progression is absolutely mechanical. That is to say that it does not respond to good taste, to effects, to a satisfaction of an aesthetic order, but uniquely to a sort of unwinding that one gets from a motor, for example.”

In the same year, Morellet described the process of making artwork as “the development of an experiment [that] should happen all by itself, almost over and above the programmer.” In what could serve as a description of his own Network series, he proposed, “Let us take an example. If you superpose very simple forms (good forms in accordance with Gestalt theory) and if you vary the angles of superposition, a whole series of structures appears.”

Morellet saw this self-composing art as the latest development in a historical evolution, the goal of which was the diminution of artistic intentionality. His rough genealogy positioned “thoughtful, conscious choice,” based on “the classical conception of rational intelligence,” at the most primitive stage in the evolution of visual arts. He followed this with “unconscious intuitive choice,” which corresponded to Romantic art of the nineteenth century, and finally with “cybernetic choice,” in which the contemporary period largely eliminated artistic individuality as compositional decisions would be made by “increasingly powerful new machines, electronic brains.” The new cybernetic art based on Gestalt experiments would not only merge forms, but, as Morellet suggested, it would generate an anti-aesthetic that made use of mathematics to produce a visual therapy for the viewer.

It is not surprising that cybernetics would have played an influential role in the GRAV’s work at this time, as Norbert Wiener’s The Human Use of Human Beings had been published in a French edition in 1952, and by the time of its second English-language reprinting in 1961, Wiener noted that statistical information and control theory had become so commonplace that his book already risked seeming trite. Nevertheless cybernetics enjoyed broad success across the arts and social sciences throughout the 1960s and into the 1970s, as it inspired the development of sociological systems theory that sought to explain human interaction and set off an international wave of experimentation as artists took data, environmental feedback, statistics, and probability—or, as
the 1970 Museum of Modern Art exhibition called it, “information”—as their working medium.

The expansion of rationality to scales of the technological sublime comes through in Morellet’s *Random Distribution of 40,000 Squares Using the Odd and Even Numbers of a Telephone Directory, 50% Blue, 50% Red* (1960), which organizes random information to the effect that the organization itself becomes absurd and meaningless. Probability here undermines the referent in the promotion of code itself. This version of the painting, which Morellet reproduced in a variety of binary color codes, is composed of 50 percent blue and 50 percent red squares that he distributed based on the determination of, as the title indicates, the ordering of numbers in a given source: the Cholet telephone book (a source that was particularly appropriate given that much early cybernetic research was carried out at Bell Labs). Morellet claims that he turned to this source as a structuring device that would help him produce a painting governed by three rules: eliminate all interest in form and structure, only employ two colors and make the colors appear in a ratio of 50/50, and “obtain a random distribution of each detail.” As the even split of colors was generated by random order, so Morellet’s strict rules were accommodated by the seemingly random selection of the telephone book—an archive of numerated information, scientifically generated (see plate 2).

In Wiener’s book, he describes cybernetics as the study of effective messages of control and communication, which are measured according to processes of statistical probability by which a machine accurately translates incoming information into a reproducible signal. Morellet’s painting resembles cybernetic “control,” as the red and blue squares accurately reproduce the signals that are given by the telephone book—indeed, Morellet’s concept of “cybernetic choice” relies on such faithful reproduction. The work, however, misapplies both communication and control. Any apparent order that the painting suggests is undermined by the meaninglessness of its logic, as Morellet destabilizes “communication” by stripping away the reference of the source material. Even if the telephone book’s lists of numbers associated with individuals’ or institutions’ names were not in themselves meaningful, one knew that through the combination of the number and the device of the telephone, telephony would link one human being to another, and verbal communication would ensue. Morellet’s painting misreads the purpose of these codes, so that the functionality of the individual telephone number is cancelled and replaced with a representation of immensity. The red and blue squares communicate the idea of communication or, rather, the process that must first take place in order for communication to happen. The work virtually arrests
the viewer at the stage of flipping through a book full of numbers, not unlike the lists of numbers that Hanne Darboven would begin producing later in the decade, or that On Kawara would generate with his *Today* series (1966–2014) or book *One Million Years* (1971). Morellet, like Darboven and Kawara, points to the fact of the number as a constructed abstraction. Whereas the ultimate goal of cybernetics was the communication of a message with a referent, Morellet’s painting provides an instance of the GRAV artists’ use of abstraction to undermine assumed technocratic efficiency, as the work eliminated reference to anything. Morellet focused on the aesthetics of communication itself. Here, the signal remains semantic noise.

Paradoxically, the promise of compositions determined from a mechanical basis was that they might destabilize mechanical responses because human perception had sufficiently adapted to them. Umberto Eco made this argument in an essay he composed for the *Arte Programmata* catalogue that accompanied works exhibited at New Tendencies. For Eco, geometric paintings and sculptures responded to the divided attention exemplified by youths of the period who, to the dismay of the older generation, could study while listening to the radio. Balancing attention between co-present forms had become the new dynamic norm. Programmed art, according to Eco, captured this new form visually through the presentation of mathematical systems that delineate “fields of events’ where random processes can happen.” Such artworks draw then on a “dialectic of planning and causality.” The viewer is unable to focus his or her attention on a single element within the work that, as a result, does not form a synthesis but only produces the permanent openness of a “process of indefinite completion.” The forms within an open work were always different not just from one another, but also in their kineticism, different from themselves. In the openness of permanent transformation, these works, Eco argued, would embody a democratic potential. Their formal openness would produce a social openness as it required the same genre of participation displayed by Eco’s perceptually multitasking student.

This tension between artistic freedom and the determinations of technology was a central concern in Jack Burnham’s 1968 book *Beyond Modern Sculpture*, which analyzes the diversity of postwar geometric abstraction and practices of Op and kinetic art as they shift from the mechanical to the cybernetic age. Burnham saw the “drive toward total mechanization” in art of the time as analogous to the engineer’s objective of producing a “closed kinematic chain”—the ability of man to control motion and power in a determinate fashion through pair-closure elements that produce greater efficiency of a joint while reducing its freedom of movement. Importantly, however, Burnham
distinguishes between machine aesthetics that are more commonly associated with objects, and the GRAV’s own commitment to the eye and instability, such as one sees in the “fields of energy” of information science. Fields pervaded the technologized world through repetition that “can be perceived in the redundant array of solid-state components fitted into switching circuits in electronic equipment, the sameness that prevails over glass and steel façades of curtain-wall office buildings, the grill patterns which appear on electrical appliances and the raster structure of light display boards for computers.” The field structure of modern networks created a vision of fluid movement expanding into infinity, but the regularity of these gridded forms also produced physical and optical instability. He characterized this instability as “the result of looking at many small random motions representing a homogeneous field of activity,” such as one sees in the waving stalks of a wheat field or surface disturbances on a lake.

In considering the precursors to the programmatic art of New Tendencies, Burnham cites Mondrian’s first lozenge paintings from the late 1910s as the earliest instance of repetitive field structuring in art. Mondrian was, in fact, an artist that the members of the GRAV regularly cited as a source of inspiration. In a 1957 letter, Morellet wrote to Vasarely that he saw Mondrian as “the beginning of a new époque characterized by analysis and sacrifice.” Le Parc identified the beginning of Op art as Mondrian’s New York Boogie-Woogie (1942) (subsequently continued by the Homage to the Square series [1950–1976] by Joseph Albers, who was another significant influence on the artists). In 1960 the group collectively pointed to Mondrian’s 1941 writings as specifically relevant to their investigations of the plane between the viewer and the art object rather than the object itself. As Mondrian asserted, with abstract, nonsubjective art, the art object would cease to function as a representation and become instead a concrete presentation of reality through the objectification of vision itself. In an essay on dialectics in Mondrian’s process, Marek Wieczorek argues that the optical flickering effects created by his early gridded “diamond” canvases resulted in a “field of forces and accentuates not forms but relationships,” that is, not the object, but the dialectical tension that exists between objects, or between the canvas and the subject viewing it. As Wieczorek demonstrates, Mondrian understood identity to be produced in dialectical relationships of mutually exclusive opposites, such as figure and ground, so that the dialectic would never sublate, or neutralize, into something like visual flatness. Instead the artworks remain “alive” as their scintillation guaranteed that the space between the viewer’s eye and the work would be preserved, and the dialectic would remain active. Rather than qualifying unity in terms of “harmony,” as
did Bill, for Mondrian, unity required being able to see both sides of a dialectic simultaneously without them resolving into a distinct third term.

Wieczorek focuses on Mondrian’s *Composition with Grid 3: Lozenge Composition* (1918), the work that directly preceded and is largely identical to the diamond painting that Burnham cited, and that strikingly resembles Morellet’s later optical paintings of overlapping grids. Mondrian’s diamond is composed of two 8-by-8 gray grids on a white ground that overlay each other to create a weave of horizontal and diagonal lines and 45-degree angles across the diamond-shaped canvas. Some lines are nearly imperceptibly thicker and darker, encouraging the eye to scan across the surface. Referring to this as his “starry sky” painting, Mondrian took inspiration from the impressionists as he abstracted the relations between points that one sees in looking up at
the night sky, and, indeed, this painting produces a twinkling effect not unlike the movements of Burnham’s wheat fields and open waters. Importantly, however, the movements in the painting are created not by natural forces like wind or atmospheric interference, but by perceptual illusion. The expression of the painting comes from the impression received by the eye in the process of seeing.

Le Parc took the night sky as a subject in his 1958 painting À partir d’un ciel de Van Gogh (From a Van Gogh Sky). The black and white painting demonstrates his own translation from art that makes use of a relatively “natural” way of looking at the world to the art object as an abstracted renewal of that world such that the structure of the painting’s composition becomes the subject of the work. It is also the sole work by Le Parc whose title refers to something other than composition or the operation it seeks to achieve. Compositionally, Le Parc’s painting falls between Vincent Van Gogh’s The Starry Night (1889) and Vasarely’s similarly cosmic composition, Cassiopeia 2 (also from 1958). Le Parc isolates Van Gogh’s and Vasarely’s most emblematic elements and strips
Van Gogh’s composition down to the barest indications of dynamism. Van Gogh’s galactic whirlpool of blues and yellows is reduced to black and white blocks such that a set of sharply delineated spaces carved out by curvilinear forms pushes from left to right across the canvas in a continual flow as they arch up and swirl back on themselves. As in Vasarely’s composition, Le Parc has mirrored the upper register of the painting in negative in the lower half of the canvas. Around the same time, Le Parc completed a series of black and white paintings in the same style composed of interlacing circles, squares, and triangles whose reticulation created the impression of a perpetual shifting of alternating solids and voids. Abstraction was a form of reference that escaped representational conventions and appropriated its subject as a source of information. Reference in *From a Van Gogh Sky* pays homage to post-impressionist studies in opticality at the same time that it walks the line between an abstract study of forms in themselves and representational painting. The painting retains a hierarchy of subjectively arranged forms, the composition of which is conceived so as to image a subject beyond the work itself, even as that subject is abstraction itself.

Closer, perhaps, to Mondrian’s twinkling night sky are the gridded mobiles of suspended plastic squares from Le Parc’s series *Progressive Ambivalent Sequences* (1959–1960), which the artist acknowledges were inspired by Mondrian’s writings. Burnham points to a mobile from this series that is titled *Determinism/Indeterminism* as an example of field instability. The title comes directly from Mondrian. The same year that he composed his first diamond painting, Mondrian wrote “From the Natural to the Abstract: From the Indeterminate to the Determinate” and “Supplement: The Determinate and the Indeterminate.” In these essays he argues that the goal of art, and the success of neoplasticism in particular, is to see the enduring universality of determinacy against the indeterminacy of subjectivity and unbridled nature. Through the process of maturation, subjective vision would become increasingly consistent, which is to say, more determinate, yet Mondrian saw the process of approaching determinacy as a “reciprocal action of the opposites” in a “continual repetition.” Determination and indetermination were the kind of mutually defining dialectical opposites that might exchange positions according to the understanding of the artist, but like his twinkling paintings of the natural sky, they would refuse to resolve into a stable unity. Similarly, Le Parc emphasized the irresolution. His regularized artworks maintain instability as fundamental to their concept of progress.

As Le Parc noted in the catalogue for the first New Tendencies exhibition, where he showed *Determinism/Indetermination*, these terms involved
Figure 1.4. Julio Le Parc, À partir d’un ciel de Van Gogh, 1958. Acrylic on canvas, 76¾ × 51 in. (195 × 130 cm). © Archives Julio Le Parc. Image provided by Yamil Le Parc.
“intervention of circumstances outside the work per se” and “means of approximation: combinatorial possibilities, statistics, probability controlled chance, etc.”

Reproductions of the mobile have since been lost, but it is likely that it would have been similar to *Continual Mobile* (1963). The latter was composed of two parallel planar surfaces of equal surface area: a large black rectangular wood panel, in front of which was a second silver plane composed of individual metallic squares. The silver squares were suspended by nylon monofilament, thereby creating a wall of sections that rotated freely along their vertical axes so that, depending on the random positioning of the squares and of the viewer, there was an equal probability for the rate of occurrence in the visibility of black as of silver as individual squares patched and purged. As mobiles, their very form existed in time and constantly produced indetermination, while the continuous rotating of tiles effaces the boundaries defining individual objects in flashes of reflected light. Like the GRAY’s paintings that reject the isolation of stable fragments by drawing them into a larger, shifting field, determination and indetermination in Le Parc’s mobiles co-define each other, as the potential for indefiniteness of each element is demonstrated by its shifting neighbor, and the definition of each momentarily indefinite element is shown by its still counterparts to have a definite expression. Similarly, the work is determined in that it is a visual demonstration of the principle of its own construction. Be-

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*Figure 1.5. Julio Le Parc, *Continual Mobile*, installed at the Biennale de Paris, 1963. © Archives Julio Le Parc. Image provided by Yamil Le Parc.*
beginning with a principle that served as a basis for the construction of the work, the art-machine was free to self-compose as the panels variously pirouetted in a nearly infinite array of combinatorial permutations. While this work, like all the others, was based on a “neutrality of form” that was systematically determined, the unwinding of its motor process emphasized the randomness that made it unlikely that one would ever see the same exact composition twice. Furthermore, the work would destabilize the perceiving viewer. As Le Parc himself described *Determination/Indetermination*, the work created an “indeterminate perception-time” as its elements fluidly, ceaselessly shifted.\(^{62}\)

Mondrian’s combination of universality and abstracted perception provided the *GRAV* with a model for demystifying art while allowing it to be approachable by any viewer. Through the rational dialectical method that Lukács advocated, they were able to arrive at an instability and activation of the viewer that had a defetishizing effect as it allowed the viewer to reexperience the world. For the *GRAV*, the self-different shifting forms were not only open and productive of open reading for formal reasons proper to themselves. They were also open because they eliminated the possibility for reference to subjects beyond themselves. Significantly, the *GRAV* artists differed from the technocrats in their attitudes to interpretation. The artists understood the influence of widely recognizable forms to be important anchoring points for immutable, conservative interpretation. When one woman from television likened the *GRAV*’s geometries to “Arab architecture,” and another voice identified it as “scientific Impressionism,” Stein expressed surprise at the audience’s tendency to orient itself in relation to the work through historical interpretations, despite the fact, of course, that the group members were themselves influenced by exactly such precedents. Icons, symbols, the Ideal forms of classical art, and movements or familiar formal processes with established interpretive mechanisms would allow for preformed interpretations to be applied to artworks whose meaning would always already be stabilized by convention. While the artists found inspiration in historical achievements, their artistic ambitions required that they hide their sources so that the viewers would be entirely absorbed in the experience of looking in the present moment. Anonymous, homogeneous forms would allow for completely new situations that would promote interpretive, and consequently social, openness.

**Art for the Masses**

As artists developing a technocratic aesthetic, the members of *GRAV* applied themselves to the same problems that occupied the actual technocrats engaged in changing the landscape of postwar France. During the 1950s and
In response, the government began developing habitations à loyer modéré (HLM), or rent-controlled housing units, that were largely built quickly and cheaply just beyond the periphery of the urban center of Paris. Known as the grands ensembles, these suburban housing parks created their own set of problems, however. The original architectural designs were frequently modified to make construction cheaper; the same design teams were used on many of the projects, leading to widespread visual monotony; and building materials and design did not accord with the popular tastes and social practices of the French. The units were frequently small and noisy, and the neighborhoods lacked adequate basic services like sufficient schools, shopping and cultural centers, and connections to public transportation or parks, which led to social and psychological duress. Sarcelles, one of the most notoriously alienating cities, lent its name to a form of urbanism-induced anomie that came to be known as sarcellite.

In response to these problems, sociologist Paul-Henry Chombart de Lauwe, a researcher in working-class housing issues, and Pierre Sudreau, the first minister of construction under de Gaulle, attempted to find sociological solutions by calling for the democratization of planning. Sociology was not popular with historians and philosophers who saw the field as treating social facts as “things” while evacuating them of their subjects and their liberty, and prominent sociologists themselves complained of the misuse of sociological techniques, as they were haphazardly appropriated for marketing purposes in private enterprise. In the words of Chombart’s professor, Georges Gurvitch, sociologists doing empirical research were “straw technocrats” seized by “tестomania” or “quantophrenia.” Nevertheless, Chombart, Sudreau, and teams of experts associated with the Ministry of Reconstruction and Urbanism collected data on the population through marketing surveys and opinion studies that included installing models of housing units at the Household Arts Shows that resembled painting salons for egg beaters and washing machines. The sociologists led visitors through personal homes in already-constructed units and distributed many questionnaires. In this way, developers were able to determine that potential residents would prefer larger common living spaces, hallways, and masonry, and that they were willing to commute an additional thirty minutes in order to have their own houses. Chombart and Sudreau were, according to Brian Newsome, committed to democratizing the build-
ing process in order to improve the quality of life in new developments, even if their social aims remained relatively conservative. Many architects, town planners, and state officials did not embrace these participatory planning techniques, however. As Le Corbusier and Michel Lods insisted, it was not the place of the future resident to weigh in on the design of an apartment. The experimentation that was needed to solve the housing crisis could be undertaken only by the expertise of the technocrat. In the mid-1960s Chombart ceased working with the government, complaining that officials deployed potentially democratizing studies more in order to legitimize their own decisions than to respond to peoples’ needs.

In a 1960 article, Lefebvre outlined the problems with technocratic city planning in terms that displayed a formal imagination similar to that of the GRAV. He observed that sociology was becoming more efficient and “operational” as it sought to produce concrete effects rather than scientific knowledge. The technocrats were more concerned with eliminating problems than with becoming conscious of them. In particular, he was concerned with the sociologists’ drive to eliminate boredom and dissatisfaction in order to produce equilibrium and stability. He observed that technocratic city planning paternalistically atomized the city into family units that were destructive to the social fabric because they lacked spontaneous, collective urban traditions that develop across centuries. This resulted in a “puerile functionalism” that imagined it could predict aspirations and needs in advance, yet which actually resulted in boredom due to the fact that the spontaneity on which culture thrives cannot be defined, reduced to analysis, or enclosed in operational synthesis. Spontaneity, on the other hand, would create a sense of plenitude and satisfaction in everyday life. Lefebvre’s proposed sociology of dialectical humanism broke the rigid unity of the technocratic city by taking account of the “non-functional, of the supra or transfunctional . . . in social relations” by promoting the “ludic” as a way of restoring emotion and surprise to social structures.

Just as the GRAV embraced information science in the postwar era with the effect of deforming its rationalism, so they took up the HLM as a social fact that offered new opportunities for artistic intervention. Even if they did not make explicit observations about the suburban developments, it could be said that, like Chombart and Lefebvre, the group’s objective was to ameliorate the quality of life for their residents by improving both the appearance of the buildings and the quality of engagement that the viewer would have with art objects in them. The HLM presented a new formal context that demanded new artistic forms. In an uncharacteristic embrace of the rhetoric of artistic
expertise, Le Parc penned a letter to the Craftint Manufacturing Company asking if they would provide him with a quantity of their products that were beyond the artist’s financial means in 1960. “The character of my investigations,” he wrote, “drives me to the point where the utilization of traditional materials has given way to experimentation with the new materials of modern technology. . . . My current experiments transform little by little into true works of art, with characteristics belonging to our era where all the paths of human investigation converge, and thus, united with my capacity and artistic sensitivity, the purity and the quality of materials that you fabricate find themselves exalted by an artistic use.”

Indeed, five years later the group was featured in an article that appeared in the trade magazine for the French electric company. The author, art critic Anne Tronche, saw industrial materials as already producing aesthetically compelling effects in the uses for which they were designed: “It suffices to look around us to understand the vast phenomenon of visual saturation that seizes us in a time when factories are being mechanized and stylized in the extreme, where cities rise up in the magic of glass and aluminum, and where, thanks to the perfecting of the optical, of astronautics and of underwater research, the eye plunges in the world of unknown colors and forms. A new aesthetic is born that takes account of the upheaval of social structures.” Central to these new artistic investigations, noted Tronche, were the technologically advanced materials that artists such as those working with the GRAV were using: nylon, polyester, Plexiglas, plastic, stainless steel, and, of course, electricity. “This symbiosis between art and science opens perspectives and presages a profound change in our everyday décor,” she concluded.

In 1965 Sobrino created his first “permutational structure” on an architectural scale for none other than the city of Sarcelles. Constructed of stainless steel, the uniform interconnected plates of the twenty-foot-tall tower matched the identical prefabricated and interlocked housing units, while creating an alternating rhythm of metal and void that responds to the syncopation of windows in the façade of the facing apartment block. The work was part of an ongoing series of “structures” made from Plexiglas or metal that he created throughout the 1960s. Much like the ready-to-assemble flat-pack furnishings found in the homes of budgeting urbanites today, Sobrino’s towering sculptures were constructed from identical subdivisions of prefabricated slatted squares. Owners could easily slide together small-scale models to produce constructions of various heights and breadths, depending on the space allowed. The visually seductive crystalline structures created shifting patterns of light and shadow, and they would offer a perceptually engrossing alternative to the
monotony of the HLM. The monumental work that he created for Sarcelles lightens by proximity the weight of its neighboring concrete constructions, since circumambulating his tower reveals that its volume is composed entirely of reticulated surfaces. Shining and flashing in the sun, the stable object would twinkle like the field structures of Mondrian’s diamond compositions to create a dialectic that does not resolve into formal stability, and that provides a transfunctional icon based on the spontaneity of viewer participation.

Shortly after the GRAV began making works that it considered appropriate to the new housing developments, fashion and industrial designers began appropriating optical patterns to embellish the modern age. The same forces of mechanical reproduction that allowed for the destruction of the autonomous art object also produced the conditions for another kind of multiple: that of the capitalist commodity made ubiquitous by its availability at the local Prisunic department store. “Dresses, wigs, gloves, eyelashes, earrings, the woman of ’66 has 100% adopted Op-art” announced an article in the daily metro newspaper *Le Parisien*. “Kilometers of ‘Vasarely’ are sold: fabric, dish-towels, scarves, sheets, napkins, wrapping paper.” Vasarely’s own response to this condition, seemingly without irony, equated these products of planned obsolescence—designed for private consumption and to the benefit of private enterprise—with the establishment of a public good. “I am not for creations as private property,” he said, referring to his own authorship. Instead, “one must create multipliable art.” Morellet adapted Vasarely’s position to a strategy in the battle with expressionism, proposing that they convince the public of their own superiority by “producing ‘canvases’ in series and selling them cheaply.” The GRAV would echo this sentiment in an essay on multiples six months later in which they humorously reversed the prestige of the unique work. By suggesting that “owning a work is less alienating when a hundred people own the same work,” the group would challenge the fetishization of taste, implicitly suggesting that individualism is a form of social alienation. Multiplying the number of art objects available for purchase would instead broaden the relationship between art and viewer to an entire imagined community that shared the experience of the artists’ challenge to ordinary perception. In order to truly alter the relations between audience and art, however, the “cultural demands” of the object would need to change since making multiples would not in itself lead to a fundamental shift in the perception of art’s aura. As long as art remained a product of speculation, it would simply allow a somewhat larger audience to consume the myth of the sacred art object.

Speaking not of dishtowel patterns, but of their own artistic works, the GRAV similarly related their production of multiples to the processes of in-
 industrial production, as they hoped to reach unit volumes reaching into the thousands. As François Pluchart noted, they imagined that ideally their art objects would be available for distribution at Monoprix. If one were going to make artworks for the HLM, they would have to not only be made of the materials from which the grands ensembles were fabricated, but also have to re-create the serial repetition of the building units. The anticipated demand determined the method by which the works were supplied. Necessarily, this social need had an economic component. As multiples themselves, grands ensembles apartments were designed to be cost-efficient, and so was the art that the GRAV made for them. The scale of their production and cheapness of their manufacture was to make them affordable to those with modest incomes—a
sort of art à prix modéré, even if their manufacture and purchase were not subsidized by the government. Critic Saul Yurkievich noted that “if [Le Parc] could, he would give [the work] away.” Comparably, journalist Christiane Duparc observed that their work could be purchased for less than the price of what might, by comparison, be assumed to be its functional equivalent: the television! Nevertheless, dynamizing the perceptual experience of the HLM was to remain a utopian fantasy, as the GRAV sold almost no works until the late 1970s, and then they did so only through the traditional conduit of the gallery.

Importantly, however, it was not financial gain that motivated the GRAV to dream of mass retail distribution, but the distribution itself. The artists countered their high-tech aesthetic with a low-tech design that made it possible for them to be produced by anyone “with half a talent for construction.” Likening the work to the craft of a weekend bricoleur was not uncommon. Already in 1963, an article on the work of the GRAV had appeared in the magazine Craft Horizons. Set among essays on “Crafts for the Aging” and instructions on how to make traditional pottery, the magazine ingratiated the artists with its readership by suggesting that “their work, elegantly conceived, gives one the impression of being at a Hollywood premiere.” Thanks to the availability of industrial materials and simplicity of design, the alienated inhabitants of technocratic efficiency’s everyday banality could thus produce their own private fantasy stage sets of mass escapism. Craft Horizons keenly observed the disorienting visual effects produced by kinetic works that sought to merge time into the spatial field of the object. Crafters could anticipate “incomprehensible, identical repetition of detail, resulting in retinal fatigue so that the image blurs,” while “transparent materials create ambiguous space.”

If simplicity of construction in the GRAV’s paintings and sculptures was intended to empower viewers by allowing them to observe the mechanics of the illusion, then putting the tools to construct illusionistic objects in the hands of the viewers would only further develop their capacity for demystification. Larry Busbea describes such art environments as confronting subjective agency with spectacular immersion through the conflation of optical and literal, phenomenal and actual spaces. In the GRAV’s own work, he describes the “inherent incompleteness of the art object” such as the perpetually moving and blurring mobile, as an aspect of their “social project, which involved seeking sublation via the demystification of high culture, without, however, celebrating mass culture.” Yet the artists embraced a popular culture that was not reducible to that planned by the technocrats or sold by the culture industry. The spectacular appeal of mass aesthetics would be democratized not only by broad distri-
bution of serially produced objects, but, moreover, crafting could provide an exceptional occasion for a theoretically infinite serialization of the works, and the sovereignty that the spectator would have over the object would become increasingly popular.

A few months later, the group began putting their artworks directly in the hands of the spectators at the Third Paris Biennale, where they presented an architectural installation that organized sixteen of their works into a series of rooms and corridors called *The Labyrinth*. In addition to flashing neon lights and slowly twirling mobiles, a number of works created environments that required the bodily engagement of a viewer who would no longer just look with the eyes but would understand that looking could be determined by a body that moves through space. Curved mirrors, inhabitable nylon-cord cylinders, suspended body-length strips of reflective sheet metal, and balls suspended against mirrored trihedra required the viewer to manually reach out and stretch, tap, or rotate objects in order to traverse barriers and release the potential energy of objects at rest. Movement was no longer only a visual illusion perceived by an immobile viewer, but it was also now produced by the relational displacements of both viewer and art. In a text that the artists composed on the occasion of exhibiting this funhouse-like environment, the artists explained their difference from the technocratic disposition: “The interest invested by the Group in the viewer is different from that which might be lent him by a scientific mind in search of findings, which might use him as a statistical factor by subjecting him to tests. It is also a different path than that which, preoccupied with cybernetics and electronics, leaves the spectator on the margins of highly technical projects, or considers them as informational elements for producing changes in the work with electrical cells.”

Instead, the labyrinth would allow the participant to control the action him- or herself. Nevertheless, the participation that the artists envisioned depended on an element of surprise and discovery. Slow revelation of corridors and unanticipated spaces revealed themselves by twists and turns. The form of a labyrinth highlights architecture’s ability to control the actions and movements of individuals as it puts the participant in a continually tentative position.

The figure of the labyrinth itself multiplied across disciplines and ideological dispositions during the 1950s and 1960s, symbolizing play, discovery, and freedom for groups as different as the Situationist International, the New Realists, and Spatial Urbanists. As the GRAY began to move away from individual objects and more toward environments, installations, and networks, the stylistic distinctions that had been important during the 1950s faded. Al-
though the group’s formal language consisted almost entirely of circles and squares arrayed in various colors and patterns, Catherine Millet went so far as to suggest in a later review of Le Parc’s work that the artist had more in common with Jackson Pollock or Mark Tobey than Vasarely.\textsuperscript{85} Seemingly taking interpretive cues from Jean Tinguely’s métamatic drawing machines, Millet argued that the two expressionist artists allowed for greater systematicity and autonomy of elements in their paintings than Vasarely due to the latter’s persistent belief (as the GRAV artists had themselves observed years earlier) in the importance of artistic choice. Regardless of whether or not Pollock or Tobey could be said to embrace or eschew authorship, it is the case that the GRAV artists’ works share some features with the expressionists. Most notable perhaps are the large-scale and all-over compositions that give the impression that the work could envelop the viewer into its own environment. Indeed, similar to Allan Kaprow’s environmental adaptation of expressionist canvases in the American context, the GRAV artists would soon try to incorporate the viewer bodily as they expanded their works to create labyrinthine installations to walk through or, in one case, drive through.\textsuperscript{86} Claiming to be inspired by Pollock’s environmental all-over style, Kaprow created representational happenings and accumulations that transmitted the cacophonous immediacy of the minutiae of everyday life. Le Parc, in fact, acknowledged the influence of Pollock’s even spatial spread across the canvas on his own work.\textsuperscript{87} The GRAV’s early paintings and sculptures of the 1950s and 1960s gesture to infinity by pulling the viewer into an encompassing space of fragmented, shifting, distracted vision. As the paint wrapping around the edge of Pollock’s stretcher bars alludes to the infinity of the space beyond the canvas, so Stein’s modestly sized \textit{Squaring the Circle} indicates a continuation beyond the boundaries of the frame as bars of red, yellow, and orange continue to expand past the circumference of the circle in the completion of their series.

The expansiveness of the groups’ early work is implied by a set of photographic studies that Le Parc manipulated like puzzle pieces in the composition of a larger painting, \textit{Instability} (1959). In the photograph, black circles borrowed directly from Vasarely dot a white canvas in a perfect grid, but each of the circles is deformed in the same way, as a slice has been lopped off at a quarter of the way across its diameter in order to leave each circle with a flat side. As the circles progress from right to left and top to bottom along their horizontal and vertical axes, they rotate slightly so that the flat side has turned 90 degrees off its original axis by the time it reaches the opposite side of the photograph. To compose the canvas then, Le Parc made four enlargements of the photograph so that they could be arranged in various orientations to pro-
duce different visual vectors. The arrangement that he chose, and which survives in his notebooks, is one in which the photographs themselves follow the same permutational logic of the circles within them as each is rotated 90 degrees from the next, and the four come together to compose a larger square. Since each enlargement is identical, Le Parc’s canvas truly illustrates the “anywhere is everywhere” of a Pollock that is “going in all directions simultaneously.” Standing before the canvas, one becomes lost within it. It becomes impossible to focus on serial details as the contortion of each isolated element draws attention outward and elsewhere. The whole insists on its relation to the part and vice versa, as every focused moment is instantly distracted by what is in the peripheral field, and, likewise, each focused moment itself quickly becomes periphery as the eye is drawn away and the viewer is drawn in. The camera perfectly expresses the purpose of the mechanical geometry of a GRAV
work. Just as the anonymous forms lend themselves to identical replication, so
the camera allows them to proliferate, rendering them all the more universal
in their ever-diminishing particularity. With this process of composition and
infinite expansion through repetition and permutation of the photograph, the
expansion of the work of art would become only as limited as its mechanical
reproducibility.

The GRAV’s labyrinthine environment appears to draw specifically from
the group’s devotion to geometric abstraction rather than from the chaos
of the city streets. The motif of the labyrinth appeared five years earlier in
a series of engravings and paintings by Stein. The simple blue and green, or
blue and black parallels, invite the eye to trace lines through the angles that
contort across planar space. At the same time, the alternation of proximate
colors creates visual confusion that exacerbates the unsustainability of the
concentration required to do so. As the eye is drawn in, it becomes lost within
the maze. He quickly extended the optical tactility of his two-dimensional
labyrinths to develop an object that invited manual tactility. Stein painted

Figure 1.8. Groupe de Recherche d’Art Visuel, preparatory drawing for the exhibition
seven panes of glass with white lines that followed the dimensions of the panes themselves in a rectilinear inward spiral. The seven identical plates could then be flipped or rotated 180 degrees and slid left or right among four long parallel grooves carved into the deep-set black wooden frame that held them. Any number of paths could then be created by the superposed patterns of intersecting lines. The reversible, manipulable object formally resembles El Lissitzky’s early twentieth-century Prouns or Josef Albers’s isometric and rotational geometries, such as in his oil-on-masonite painting Equal and Unequal (1939). Both Lissitzky and Albers created technical, architectural constructions that eliminated the realism of linear perspective in favor of impossible volumes that illusionistically overlap and recede into depthless space. Albers’s work, in particular, resonates with the work that the GRAV would later carry out,
as he sought to investigate the relationships between the counterposed im-
balances of simplified forms. The isometric architectural plan that the GRAV
used to communicate the layout of their labyrinth mediates between the ab-
straction of the group’s geometries and the inhabitable space that, in escaping
functional utility, remains itself a sort of abstraction—an image that does not
just absorb the viewer’s attention, but into which one can actually enter. The
labyrinth was an object of confusion, disequilibrium, and optical illusion, but
equally of concentrated participation. As an architectural structure, it was
the ideal environment for framing objects whose effects depended on perpetual
immersive attentiveness.

More than just creating a relationship between spectator and art object,
the labyrinth manifested the social significance of the multiple. The point of
the multiple was not to re-create many times in separate apartments the ex-
perience of the unique work of art. Rather, as Le Parc put it, “one must strive
toward the ‘collective multiple,’ the game room, the public action, where spec-
tators are simultaneously engaged, where each person will become at once ac-
tor and object of the spectacle.” In effect, what interested the artists was the
way that the spectator was him- or herself produced by the work of art. If it was
successful, not just the work would be multiple, but the spectators themselves
would function as a group of multiple individuals. The success of such work
then would depend entirely on location and the availability of large groups
of potential collectives. “These labyrinths, these game rooms,” Le Parc said,
“they must be placed in barracks, schools, HLM, to vanquish the loneliness
of the masses, and find in some way the participatory conditions of primitive
societies.”89 As though ironically, the artists then distributed their first ques-
tionnaire when they showed *The Labyrinth* at the 1962 exhibition *Instability.*
The purpose was to determine, among other issues, whether the participants
saw this work as destined for museums, art galleries, public buildings, private
collections, HLM, Brasilia, or the participant’s own house.90

In effect, their goal was to help the individual break out of society’s var-
ious prisons. In an effort to effect a real physical investment in the work and
the collective then, next to a labyrinth that they installed at the 1963 Biennale
de Paris, the group posted a sign that said “It is forbidden not to participate,
it is forbidden not to touch, it is forbidden not to break.”91 By the end of eight
days, none of the works in the labyrinth functioned any longer. The evils of
civilization may also have provided inspiration to the existential, angst-ridden
expressionism of the 1940s and 1950s, but by the mid-1960s it may have been
this same abstract work that produced the need for expressions of catharsis.
As one journalist joked, it was perhaps the biennial’s “kilometers of tachist
monotony,” which visitors “suffered” just before arriving at the GRAY’s installation, that caused them to be so brutal with the lighthearted interactive display.92

While Op art had already found its way into popular culture via the multiples of street fashion, in 1966 the GRAY decided to take their own brand of “collective multiple” beyond the walls of the gallery and into the street in a sort of traveling version of the labyrinth.93 The works presented during A Day in the Street asked the viewer to participate voluntarily in the generation of instability as he or she physically engaged with the objects presented. Like Stein’s Squaring the Circle, his giant Kaleidoscope built geometric forms upon each other, but rather than gradating color, it abstracted the viewer him- or herself into fragmented forms that refracted and multiplied into an expanded geodesic sphere. Sobrino’s Modular Elements for Manipulation invited participants to work in construction teams to transform identical lozenge-shaped Plexiglas “elements,” which were transparent and reflective, into a large sculpture of various possible dimensions that, like Stein’s kaleidoscope, would then reflect its construction team in fragments that would shift with the movement of the viewer. Transported directly from the labyrinth, Yvaral’s Penetrable Kinetic Structure similarly fell somewhere between sculpture and environment. Like the artist’s other works in nylon cord, this habitable object made use of moiré interference of slightly skewed sets of parallel lines. Testimony reports that this cylindrical screen caused the city to shimmer and accelerate as viewer and exterior environment passed independently on either side.94 Le Parc’s curved Mirror Passage turned back on the viewer, distorting his or her reflection in what Alain Jouffroy described as a sort of sadistic narcissism.95 His Lunettes pour une vision autre (Glasses for an Other Vision) refracted the line of sight with reflective curved or slatted metal strips, Shoes for an Other Approach made it impossible for the wearer to maintain balance atop their spring-loaded soles, Spring Seats continuously tried to eject sitters, and his Mobile Tiles tipped back or forth depending on one’s footfall. The works continuously put the viewer, sitter, or pedestrian in a state of disequilibrium that required conscientious effort in order to apprehend the world through the most ordinary functions.

In addition to these larger works, the group handed out balloons to female passersby and pins to pop them to their male counterparts, they distributed whistles to cinemagoers queued up to buy tickets, and, to end the day, the group created a paparazzi-like scene of media spectacle as they paraded from the Place Saint Michel to the Jardin Luxembourg at 11 p.m., illuminating people on the street with electronic camera flashes.

With A Day in the Street the avant-garde tradition of attempting to erase
the distinction between art and life could merge with the site of the organic “everyday,” to use Lefebvre’s term, as human potential was activated at the level of what Michel de Certeau would later write of as “daily practice.” By 1966, however, it would seem that the supposed rationality of the public sphere had become sufficiently saturated by the quantifications of market researchers that many were weary of the group’s intentions. As Pierre Descargues noted, many assumed that the artists were going to attempt to sell them something, or anticipated that the event would be followed by a survey. And, indeed, it was! Alongside their art objects, the artists handed out flyers that explained their ambitions to “smash the routine of a weekday in Paris” with participatory situations, and that then proceeded to ask them about their perceptions of the art world. Rather than just collecting information about the viewer’s attitudes, however, the questions acted like Stein’s kaleidoscope.

Figure 1.11. Groupe de Recherche d’Art Visuel, Modular Elements For Manipulation, installation view, A Day in the Street, Paris, 1966. © 2014 Artists Rights Society (ARS), New York / ADAGP, Paris. Provided by Yamil Le Parc.
or Le Parc’s glasses, fragmenting and juxtaposing perception so as to develop an “other approach” to art. The questionnaire opened up the possibility that one could see modern art as having more or less personal appeal (88 percent affirmative), social purpose (71 percent affirmative), an internally produced critical apparatus (68 percent affirmative), and/or absolutely no worth whatsoever (51 percent affirmative). In addition to asking about the purposes of art, the artists similarly asked about the effectiveness of the demonstration under way, suggesting that it may or may not be related to gallery exhibition, that it could be seen as self-promotional publicity, pretentious, political, intelligent, or purely amusing. Unlike the surveys of technocrats, this process could not claim to impart any actual scientific value, however, not least of all because of its radical lack of quality control. Only 79 percent of those who filled out the
questionnaires were present at the event, and only 68 percent of those actually participated! As any sociologist would note, accurate results for any study cannot be achieved in a short period of time, certainly not in *a day*.

The same year that the GRAV descended on the streets with their questionnaires, Pierre Bourdieu and Alain Darbel published their own sociological study of art culture, *The Love of Art: European Art Museums and Their Public.* The study was designed as an attack on Malraux’s *maisons de la culture*, which he had developed across the country in order to promote literacy of high art among the masses. Like the GRAV artists, Bourdieu and Darbel opposed Malraux’s mystical regard for art that saw its value as self-evident, and like the GRAV artists, they tabulated data acquired through questionnaires. Relative to the GRAV, however, the sociologists’ aims were rather modestly constrained by the observational and theoretical nature of their profession, as they simply aimed to demonstrate and explain the contingency of taste rather than fully overhaul the *habitus* that determines it. Indeed, while the GRAV and Malraux were ideologically opposed, their ambitions were comparable, as both aimed to improve society. Whereas for Malraux this involved molding it to an ideal model, however, the GRAV artists aimed to make art more democratic by doing away with the concept of taste altogether. Rather than opposing sociological
data to technocratically produced monoculture, as did Bourdieu and Darbel, the GRAV artists took the sociologists’ conclusions as self-evident and instead chose to harness the questionnaire for its very ability to corrupt its subjects. While social scientists in the postwar period attempted to develop cybernetically influenced approaches to the social sciences through systems theory, Wiener was skeptical of the applicability of such experimentation. He noted that, unlike physical phenomena, which can be isolated to the extent that the researcher does not excessively influence the test results, it would be nearly impossible not to affect a human subject. The problem with the opinion inquiry, Touraine has observed, is that it “puts those that it interrogates in a very particular situation: an inquirer, an unknown, a stranger to the work or living place, poses questions to a person while this individual conversation, and this provoked reflection maximally isolate him from his milieu and from his everyday problems.” This, indeed, is a perfect analysis of A Day in the Street, conveyed as though in its greatest success.

The artists used their source obliquely, less to communicate scientifically acquired data on a topic of interest than to hijack a methodology and turn it to other ends. In the spirit of the development of sociology as yet another “machine” for the collection and control of communication in the modern age, the GRAV artists adopted it as an artistic technique. Similar to the controlled incoherence of Gestalt theory gone awry in Morellet’s telephone paintings, the GRAV questionnaires evolved into a critique of the cybernetically influenced field of sociology by sabotaging the singular message that the tool was designed to efficiently communicate and replacing it with open-ended uncertainty. In the same way that they misappropriated other source material such as the telephone book to draw attention to the perceptive processes of communication, the questionnaires were primarily educative as they used the process of questioning more as a suggestion of ideological construction than an effort to collect data.

Already, it would seem, their test subjects were prepared. While the original questionnaires from A Day in the Street are lost, responses from an earlier questionnaire, which were distributed alongside their labyrinth at the 1962 Instability exhibition, indicate that respondents were already equipped for free-form appropriation of the social-scientific attempt to create categories into which they should fit. They undermined any faith that one might have in attentiveness to the questions by blacking out entire sections seemingly at random; one person added hatch marks next to each given “yes” or “no,” to suggest degree of accord or discord, and thereby complicated the disingenuous simplicity of the process by exerting more individual agency than requested;
and viewers found multiple ways of simply rejecting the premise of several questions altogether, as did Vasarely, who refused to single out favorite works from the exhibition as the questionnaire asked and instead insisted on the group’s collective identity by writing simply “GRAV.” Rather than attempting to create determining structures by which to organize broad cultural trends, the GRAV’s use of the questionnaire was consistent with their conviction that the viewers’ process of perception was central to the creative act itself. At the same time, their understanding of the role of observation was not inculcated in a *habitus* in which the viewer’s disposition before the object merely affirmed the underlying assumptions of art that formed a general ideological disposition. Rather, the questionnaires had a heuristic function, as they posed questions as a series of potential alternatives for interpreting contemporary art that would undermine fixed ideas. Far from treating their subjects as “things,” their use of sociology provided the opportunity for a form of feedback that made use of the communicative advantage of the public sphere, albeit in a way that promoted disarray and dissent as much as rationality and consensus.

Unfortunately, as Restany observed, the project was not a triumph. At Opéra in particular, passersby were unwilling to take time out of their day
to experiment with the unfamiliar devices on display. Public space here was more for passing through on the métro en route to the boulot rather than for spontaneously engaging a new perceptual experience of the city. This tended to be the case throughout the right bank . . . and then it rained. “The members of the GRAV went to the general public,” Restany noted. “They brought experimentation without deception, with method (maybe too much) and good humor.” And even though brief unexpected moments of communication were established, “Paris did not come to meet them. It would be profoundly unjust to blame it,” Restany argued. “This effort was not a master-stroke, but the lesson is profitable: we can better measure the great distance that still separates art from life.” If their project did not revolutionize society, however, it did make an impact at the level of the individual art critic. Whereas Restany himself was among the most well known of a generation that centralized the role of the critic who would attach himself to a signature group, the promotion of which would then double as self-promotion, in writing about A Day in the Street, in contrast, Restany took to the sidelines. As least for a day, he distanced his own position vis-à-vis the work just as the artists attempted to displace their own position as determinate of its meaning. The critic took on

Figure 1.19. Questionnaire response to the exhibition Instability, 1962. Ink on paper, each 8½ × 11 in. (21.6 × 27.9 cm). © Archives Julio Le Parc. Provided by Yamil Le Parc.
a role closer to that of the GRAV itself as he stood back to observe the behavior of the public. It was the audience, in this case, that determined the success or failure of the work.

Collisions

Several of the interactive objects from *A Day in the Street* reappeared two months later when Le Parc represented France at the 1966 Venice Biennale and won the painting prize, despite the fact that the work he exhibited was not painting. The work he showed at Venice, as well as at a set of two simultaneous exhibitions at each of Denise René’s two gallery locations in the fall, were the same types of games and interactive objects that the group as a whole had shown in the labyrinths and during *A Day in the Street*. These included the *Spring Seats* and *Lunettes pour une vision autre* as well as hand- and body-length mirrors whose reflective surfaces had been deformed in order to distort the reflection of the viewer. While there was not a van in Venice to taxi the artworks around the city as there had been in Paris a few months earlier, here the van itself transformed into Le Parc’s *Anti-Car*. An agglomeration of the forms and ambitions contained in these other works rigged onto the chassis and motor of an old Citroën 2cv, the work produces another approach for descending onto the streets. As Le Parc stated, he considered the work an ironic comment on the use of the automobile in modern life. As a symbol of consumer society, the car went from being celebrated during the 1940s and 1950s to being derided during the 1960s. Le Parc wanted his own *Anti-Car* to be a “maieutic machine” for “deconditioning.” The Greek *maieutikos* refers to midwifery and is a term often used to describe the Socratic process of “delivering” insights believed to be latent in the mind of one’s interlocutor. The maieutic method encourages learning but is opposed to forms of teaching that involve the direct inculcation of ideas. Rather than providing new information, it encourages learning by provoking the recall of what one already knows; rather than telling, it shows by leading the individual toward the nature of specific concepts or labyrinthine aporias of frustration. Le Parc’s car, then, was intended to cause the person “driving” it to be aware of, and to question, habitual gestures—including steering, braking, and shifting—that one typically must execute unconsciously in order to give undivided attention to the road and avoid hitting other cars or pedestrians, especially pedestrians who might accidentally lurch into traffic because they are unable to walk properly while wearing Le Parc’s spring-loaded shoes, or to see what is directly in front of them while looking through his slatted glasses!

One favorable review of an exhibition that Le Parc held at Denise René
took the work on its own terms, seeing it as “inverting alienation” through a form of consciousness raising that came through participation. Yet in other cases, it was not the popular aspects of the work that received accolades, but the work’s ability to appeal to metaphysical aesthetic standards. According to one reviewer, Le Parc’s large curved mirrors presented “une leçon de félinité pour chattes de luxe” (a lesson in feliness for luxurious pussies) and in doing so “created such a pure beauty as could not be spoken of other than in musical language.” The critic was at a loss for words and suggested that one just had to see it.

In another instance, a reviewer justified Le Parc’s prize at Venice by bizarrely commenting on the “artisanal virtuosity” that it takes to make Op art (most Op paintings are created by applying industrially fabricated acrylics in paint-by-numbers fashion, to a surface that has been divided into separate color fields using drafting tools).

The majority of the criticism that the artists received questioned the artistic validity of the work. Numerous critics commented that, rather than art, these objects reminded them of what one would expect to see at Luna Park. Those who made this particular criticism did not seem to be amused. Conversely, others praised it simply because it entertained, as was the case with a
reviewer from *Time* who likened the biennale exhibition to “FAO Schwartz on the 23rd of December.” Alain Jouffroy found Le Parc’s games humanistic in the warmth of their ability to amuse, although his reasons for embracing their novelty derived from postwar Europe’s deep artistic conflicts. For the most part, Jouffroy was repelled by the biennale’s promotion of nationalism, the senility of the commissioners, and the disordered and disavowing art of “a generation that fought on all fronts to triumph, every year, over the accusation of being imitators, [an accusation] that has weighed on each of its members since the day that Churchill, Stalin, and Roosevelt shook hands over an ocean of cadavers of all colors.” Le Parc’s games, in contrast, one could neither win nor lose, thereby giving them a purity that, for Jouffroy, was refreshingly gratuitous.

Art historian Arnauld Pierre traces the prehistory of Le Parc’s games back to the turn-of-the-century fairs that exhibited new achievements in rational technology and its theatrical deformation in spectacle that had been so influential to the Dadaists and the Delaunays. Pierre has described the GRAV’s interactive works as isolating and exaggerating “constraints” so as to transform “a mechanism that is unconscious most of the time” into “a perceptual act that is consciously motivated” via “the exacerbation of the most quotidian situations.” With these later works, however, Pierre argues that their interest in the eye and objectivity is “overrun by the imponderable,” by “illusion and evanescence, the fleeting reflection and ungraspable shadow, metamorphosis as the only stable state.” In the GRAV’s festive overthrow of everyday perceptual experiences, then, their interactive game–like objects recall Walter Benjamin’s description of bumper cars, whose ludic attraction is anything but gratuitous. “What the Fun Fair achieves with its Dogem cars and other similar amusements,” Benjamin wrote, “is nothing but a taste of the drill to which the unskilled laborer is subjected in the factory.” The repetitive slam of the cars, like the isolated constraints of the GRAV’s games, provided what Benjamin described as “a sample which at times was for [the alienated worker] the entire menu.” Whereas for Benjamin, the amusement park functioned as a training ground that prepared the worker for the shocks and conveyor-belt automation of the factory, the GRAV intended their works as a form of deconditioning that would make the participant more sensitive to his or her environment. Whereas the GRAV’s earlier works may have provided, in Pierre’s assessment, a “‘dynamic touch,’ made of exploratory and performative movements . . . bringing about the finest and richest perceptions,” works like the Anti-Car would seem to undermine by oversaturation the delicate distinctions between cutaneous and articulated forms of sense perception.
In the case of both Benjamin’s bumper cars and Le Parc’s Anti-Car, what is essential is that the experience is one of experiential immersion. The reference point for Benjamin’s modern immersive context was the cacophony of the big city whose traffic and jostling crowds merged haptic experiences with optic phenomena, producing a sort of shock of which the factory was only one expression. Benjamin’s urban dweller might still possess the fragmented vision of a “kaleidoscope gifted with consciousness,” such as he cites from Baudelaire’s *The Painter of Modern Life*, but in an era beset with traffic signals and the flows of energy they control, fragmenting one’s gaze had become more a survival skill than an epicurean leisure activity. Just as the bumper car trained the worker to adapt to the machine of the factory, so the bumper car–like experience of Benjamin’s crowd effectively transformed the passerby into a sort of dodging, smiling automaton mechanically weaving through a mass of bodies. It was such mindlessness as produced by this hustle and bustle that the GRAV sought to combat with their objects. Whereas the worker could be said to be an actor in his own process of alienation, the work of the GRAV artists attempted to make him or her both actor and consumer and thereby replace alienation with self-reflective awareness. Stein’s *Kaleidoscope* would seem to literalize Baudelaire’s metaphor while updating it to correspond to the aesthetic of the technocratic era. For Baudelaire, the metaphor described a diversification of views that served a primarily social function, as the flâneur immersed himself in the crowd so as to gain proximity and identify the rag picker, prostitute, and other “heroes” of modern life. For a time in which the technocrat had become the new modern hero, the physical object of the kaleidoscope was less a tool for casting the gaze outward than for concentrating on the proficiency of the eye looking, effectively, at itself. The social purpose that Le Parc claimed for the group’s work took place, in the first instance then, at what Pierre describes as the proprioceptive level. Both the bumper cars and the GRAV’s perceptually destabilizing works honed, as Benjamin put it, the “art of being off center” by training the senses, yet the GRAV purposefully used this instability with the ambition of creating a greater sensitized whole.

Exceptionally, Otto Hahn and the Situationist International questioned the GRAV’s success at achieving such a whole based on the terms that were primary to the artists themselves, even as their critiques took opposite positions in explaining the group’s failure. Each considered the effectiveness that the objects could have in producing a new relationship with the viewer given their status as art. As Hahn asked:
Neither masterpieces, nor meditations on culture, nor definitions of new problems, what is the work of Le Parc good for? If it does not convey anything other than the beauty of a reflection that undulates, one does as well to look at the thousand sparkles of a diamond or the perfection of a crystal. By a pirouette or alibi, Le Parc avoids responding: his spring seats, eyeglasses with fragmented vision, ironize on the modest contribution of the artist; on the other hand, the participation of the public, the spaces of activation, the construction of game rooms remain ideas too vague to justify the function of art. Here are the limits and the contradictions of an art whose ambition aims for universal reconciliation.115

Hahn’s reference to universal reconciliation recalls the avant-garde conflict that Bürger outlined around the same period: “When art and the praxis of life are one, when the praxis is aesthetic and art is practical, art’s purpose can no longer be discovered, because the existence of two distinct spheres (art and the praxis of life) that is constitutive of the concept of purpose or intended use has come to an end.”116 Hahn claims that in attempting to merge into the space of everyday life, the GRAV ultimately risked self-defeat in an inability to retain the distinction necessary to make its critique identifiable as such. The more the wearable objects resemble everyday things to be used in everyday space, the more they undermine the idea of the artist’s exceptional position. Alternatively, if they are taken as purely aesthetic and autonomous objects, they lose their ability to effectively comment on society. Hahn would agree with the GRAV that art should be more than simply beautiful, yet at the same time, he would have its appeal be more specific than a general overhaul of social interaction.

As Guy Debord argued on the other hand, “there can be no fundamental cultural renewal in details, but only in toto,” and this can only come about through a perpetual attentiveness to the present moment. In his “Avant-Garde of Presence” essay, Debord set in opposition two types of avant-gardes: those of absence, as defined by Lucien Goldmann, and an avant-garde of presence, of which he saw the Situationist International as exemplary.117 Goldmann identified a postwar avant-garde that defined itself in terms of absence, as it fundamentally negated the reification of society while finding itself incapable of proposing any alternative. “Most of the great avant-garde writers express above all,” Goldmann writes, “not actual or possible values, but their absence, the impossibility of formulating or perceiving acceptable values in whose name they might criticize society.”118 For Debord, Goldmann’s formulation is a form of resignation. “What Goldmann calls the avant-garde
of absence;” he insisted, “is nothing more than the absence of an avant-garde.” In contrast to this, Debord offered examples of ways in which contemporary avant-gardes, such as the GRAV, had attempted to encourage presence through the integration of materials from daily life, and through the participation of the spectator him- or herself. Debord, indeed, recognized an affinity between their theories and what he called the GRAV’s “para-situationist” interest in “deforming spectacle” by transforming the position of the spectator into that of a participant. Rather than simple deformation of spectacle as it existed, however, Debord argued that what was needed was a critical assessment of how spectacle functions in society.

Like Hahn, Debord was suspicious of competing artistic movements’ efforts to achieve a “universal reconciliation” of art and life, but for him this was because what these artists offered was not true integration but mere dissolution of artistic practice into existing social structures. Unlike Hahn, Debord believed that the problem with the GRAV was that their work was too artistic. If one wanted to fully integrate the spectator, it would be necessary to eliminate the spectatorial position itself through the eradication of the conventional artistic object. According to Debord, the GRAV ultimately maintained a divide between artist and viewer such that viewer participation served primarily artistic purposes and even the gratification of the artist. For Debord, the real question was not that of viewer participation in the artistic object, but of individual participation in life itself. All art, as Debord saw it, was already participatory as it constructed a particular mode of spectatorial engagement, and as long as it was art, participatory art would be no different. Debord wrote: “To the degree that participation becomes more impossible, the second-class engineers of modernist art demand everyone’s participation as their due. They distribute this invoice with the instruction booklet as the now explicit rule of the game, as if this participation had not always been the implicit rule of an art where it actually existed (within the limits of class and depth which have framed all art). They urge us insolently to ‘take part’ in the spectacle, in an art that so little concerns us.”

Debord flattens any distinction between participation in work, questionnaires, or games. Integration of the spectator through participation in works of art could not approach the force with which that spectator was already, and without choice, integrated into modern technocratic society—indeed, by asking the viewer to conform to a set of preestablished rules of engagement, participatory art risked causing the viewer to submit to the same repressive and reifying mechanisms as the society Debord’s situationism aimed to revolutionize.
According to Debord, the GRAV’s interest in programming ultimately would undermine any effort to integrate the spectator into anything greater than the systematized work. Integration into given systems through art claiming to be participatory would not provide an experience of the “present or the potential of the revolutionary movement,” but, rather, it would reproduce a type of “sociometry” that simply “transmute[s] modern depoliticized workers into devoted militants of leftist organizations, reproducing so well the model of established society that, like a factory, they could hire a few psychosociologists to apply a little oil to their microgroups.” Further, participatory art risked exacerbating the alienation of spectacle society and underминing its own program by taking part in what Debord called “the sinister spheres of the cultural police of spectacle society who organize ‘participation in things where is it impossible to participate’—work or the leisure of private life.” Le Parc’s text on spectacle provided Debord with proof that it was, at base, an avant-garde that made no important distinction between participation and absence. “In this concern for the spectators’ violent participation,” Le Parc writes, “one could even arrive at non-realization, non-contemplation, non-action. One might then be able to imagine, for example, a dozen inactive spectators sitting motionless in the most complete darkness and saying nothing.” What proposed itself as an avant-garde of presence risks then ultimately approaching something more like the negating avant-garde of absence. Whereas Goldmann described an avant-garde writing that was self-conscious in its frustration and impossibility, the participation that the GRAV offered could be argued to give the cover of presence for the real nonaction of absence that is at work.

True to Debord’s accusations (and counter to Hahn’s), the group’s goal was never to make anything other than art, and in an interview from 1967, Le Parc affirmed that the GRAV was committed to remaining within the network of arts institutions because this was the sphere whose gravity attracted intelligible response with the greatest force. Their embrace of the artistic milieu may have limited the scope of their ability to work against social alienation, yet their project was primarily more reform-oriented from the beginning as it attempted to reduce alienation through a form of mediation and adaptation of larger cultural trends to artistic production. The articulation of presence and absence in the work of the GRAV, does, however, present a challenge to the project that they sought to achieve. Indeed, the Le Parc citation that Debord isolated as evidence of the group’s potential slide into nonaction was not representative of the group’s interest in participation. The quotation was taken selectively out of a context that went on to identify absolute states of passivity as antithetical to their project. As Le Parc continued, “If they could
no longer think, and perhaps no longer breathe, one would reach the highest level of a new art. But in remaining within these concerns, one could try to find solutions far from the absurd. Because such precocious improvisation returns to a stage of despair and boredom where it is not simply an incapacity to achieve clarity.” Contrary to Debord’s claims, the group’s ambition was not then to produce a lifeless situationism. As the work shifted from easel painting and discrete objects to sense-saturating environments and wearable devices that physically intervene between the body and the world, it invited a self-abandonment into a state of distracted nonattention that forms one half of the unresolvable dialectic that describes the GRAV’s work. Although the questionnaires and optical puzzles invited deduction, these objects would not deliver the viewer to a final rational clarity. Rather, in the GRAV’s embrace of illusionism, they perpetually decenter the viewer from his or her own experience and create effects of tenuous presence that reject independent experience of sovereign mastery over the visual illusion.

One of the dominant effects that threatened the experience of total presence that the viewer could potentially have before the work came about by rendering vision peripheral. In the first tract in which the group introduced the idea of instability and the anonymity of form, they specifically identified homogeneity as producing instability in the periphery of vision. The use of the periphery could make the viewer more aware of the activity of viewing, as it caused the eye to be constantly drawn away from any single point of focus because all the action appears to be just outside the direct line of sight. If drawing attention to the periphery remains a suggestion in the GRAV’s early two-dimensional canvases, it becomes the only mode of engagement possible with Le Parc’s Displacement series. These works from the mid-1960s make use of reflective metal placed at an obtuse angle to the main line of sight. His Screen of Reflective Slats (1966), for example, consisted of a 2.24-meter-by-2.6-meter metal frame with wide, highly reflective slats of metal oriented vertically and set parallel to one another. When looking through the screen, the viewer would see the image of what was directly on the other side, but at the same time, the peripheral slats would reflect the scene so that it was effectively fragmented and decentralized. What is fragmented is not the image of the scene opposite but the single point of view from which one looks as it becomes impossible to take in the whole. Rather, all reflections angle back to what is directly in front of the viewer, showing it from different points of view that would be impossible to apprehend in a glance otherwise. In this way, the work also collapses multiple moments in time, which would correspond to each point of view, into a single moment. With the screen it is possible to shift one’s attention from
one position to the next and to truly focus on an individual section of the work. This becomes impossible with the glasses that he designed in the same years. Le Parc removed the lenses from basic black frames and replaced them with, again, reflective sheets of metal, which were then arranged to produce different distortions in vision. One pair reproduced the *Screen of Reflective Slats* in horizontally rotated miniature, while numerous others involved reflecting the vision of each eye in opposite directions, as two separate fragments bolted to the nosepiece curved out and away from the face. This distorting immersion of the viewer into the world displaces the viewer but at the same time provides him or her with a kaleidoscopic vision that breaks apart conventional perspectives, both literal and metaphorical.

Rather than the avant-garde rupture with spectacle society that Debord proposes, the GRAV’s work invites perpetual displacements that recognize...
technocratic rationalism in an effort to trace alternative paths through its planned landscapes. Gilles Deleuze and Félix Guattari saw beyond the regularized grid of Op art to align it with the amorphous and nonformal constructions of patchwork quilts.\textsuperscript{127} Despite the optical quality that the tendency’s name suggests, Op art trains the haptic eye to discover variations and intervals among the regularity of the striated grid—a trajectory that the GRAV uncovered as they developed the repeating fragmented forms of their gallery canvases into perception-fragmenting tactile objects. With them, the housing block or city garden that had been kept at an optical remove by their gridded planning would come into close range on a spring afternoon, as one literally peered through a giant kaleidoscope to investigate the details of a world not just turned upside down, but triangulated back on itself. Although Deleuze and Guattari propose a binary distinction between smooth and striated spaces, they are not completely opposed, but, rather, “they are constantly being reversed into each other.” This is an alternative to Mondrian’s solution for evading sublation by working in polar opposites, which considers the artwork as immersed within a larger cultural context that it must negotiate in order to be meaningful. Rather than the radical opposition that Debord proposes, smooth space negotiates the terms by which the enemy defines itself. “The struggle is changed or displaced in [smooth space] and life reconstitutes its stakes, confronts new obstacles, invents new paces, switches adversaries.”\textsuperscript{128} Using language familiar to the transdisciplinary theorizations of Molnar and Morellet, Deleuze and Guattari observe that eliminating dialectical binaries is “the beginning of a typology and topology of multiplicities.”\textsuperscript{129} The fixed points of metric determination that plan cities, strategize political campaigns, analyze marketing, and structure habitus transform via haptic perception into vectors and events that unite play and work, public and private, street and art. Yet, as Deleuze and Guattari warn, “Never believe that a smooth space will suffice to save us.” Deviations are constant, and just as play can revivify the monotony of alienated labor, so it can always be turned back into a training ground in the guise of a pressure release valve.

Testimony from Garcia-Rossi suggests that even if the GRAV departed from easel painting’s traditional modes of address, their form of fragmentation nevertheless participated in the production of the self-conscious bourgeois individual. Throughout the 1960s Garcia-Rossi produced objects that resembled the television sets to which the group’s work occasionally suffered comparison. Rather than displaying the nightly news, Garcia-Rossi’s light boxes projected multicolored lights reflected off of internal rotating objects against their translucent screen. Some of the boxes project abstract shapes,
and in other instances letters spelling out “mouvement” or the artist’s name slowly shift across the screen. In one box, faintly blurred head shots of each of the GRAV members drift about—their overlapping faces symbolically reinforce the group’s production process, as collective anonymity would cause individual members’ identities to bleed together. At the same time, the boxes linger in a dreamy hypnopompic state, halfway between the dream world and alert consciousness. Indeed, as Garcia-Rossi recounts, a psychoanalyst purchased one of the light boxes just for their ability to produce this effect. The analyst installed the box in his office so that it faced the patient, and he reported that the slowly shifting lights of the box induced free association. Not quite relinquishing all faculties in sway of the type of hypnotic trance induced by Jean-Martin Charcot, the patient nevertheless drifted into the “unconscious thinking” that Sigmund Freud’s talking cure advocated as a way to access the
condensations and displacements of dream work. Crucially, what separates Garcia-Rossi’s boxes from televisions is the difference between the programming of the abstract “open work” that allows for self-directed association, and the programming of televisual flow whose associations are predetermined by a master source.

According to Debord, the GRAV’s interest in cybernetic processes would ultimately reintegrate the spectator into the systematized work, yet we should ask what kind of feedback that work-art system generates. The two forms of anonymity-based instability that the technocrats and the GRAV proposed suggest alternative distributions of power. While the technocratic vision of social systems recognized the hierarchical assertion of power of the few over those who affirm it, the GRAV’s proposal for an ideal system attempted to achieve equal degrees of contingency on the part of both the artist-authority and the participating viewer. The group’s espousal of limited yet essential participation conjures Debord’s concern at the same time that it describes the perversion of participation that de Gaulle promoted. Whereas de Gaulle imagined that the worker would participate in industry by profiting from the expertise of management without the need for self-determination, the GRAV encouraged participants in its work to understand and critique the structures of artistic “management,” from the base level at which an artist creates a work to the discursive circulation of presumptions and prejudices that inscribe art in social practice. This does not necessarily require eliminating the artwork and the spectatorial positions that it produces. Rather, it requires attention to the myriad ways in which existing structures are articulated in order to understand one’s own approach, and therefore agency, with regard to them. Proprioceptive awareness momentarily alienates the senses from any perceptive whole that would allow the viewer to experience subjective mastery, yet the “perceptual gymnastics” required to work within the GRAV’s kinetic illusions and disabling objects exacerbate the distraction that Eco celebrated to the point that the viewer becomes aware of distraction itself. Those who choose to engage with such works risk slipping into a state of automation, this time as technocratically subject versions of Benjamin’s bumper car–riding factory workers. By creating works that ask viewers to perpetually negotiate with illusions constructed by the artists, however, the GRAV resisted generating its own form of mystification based on physical enigma.
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