A
PRE-DIGITAL
MECHANISMS
IN CONTEXT
1960S/1970S

While the set of rules and protocols explicitly or implicitly established by conceptual artists may exist on a theoretical or abstract level, hence embodying one of the key mind-sets of conceptualism,[5] the use of such tools in combination with photography by conceptual artists *and* photographers indirectly connected with conceptualism (e.g., Hans-Peter Feldmann or the Bechers) yields a tangible visual outcome. Comparing such a visual outcome with a similar strategy not based on photography can yield interesting insights into the specificities of photo-based artworks. The comparison of a conceptual drawing emerging in that context, for example Sol LeWitt's *Four Basic Kinds of Straight Lines and Their Combination* (1969, see Fig. 34), with an equivalent piece, is in that respect productive: if the drawing remains an autonomous object, a set of photographs such as the multiplication and serial evolution in LeWitt's *Brick Wall* (1977, see Fig. 35)[6] not only remains connected to *what* it represents, but it is also necessarily attached to *how* it represents.[7] Photography had been primarily used by conceptual artists as a mechanical means of reproduction with a

5   Art as idea is only one of the many converging and diverging definitions of such practices, language as art being another.
6   The thirty-two-page artist book reproduces the photographs of a brick wall outside LeWitt's studio, at various moments throughout the day.
7   On his famous text on photography and conceptual art, Jeff Wall has, for instance, stressed photography's "heavy burden of depiction." See Jeff Wall, "'Marks of Indifference.' Photography in, or as, Conceptual Art," in Douglas Fogle, *The Last Picture Show*, op. cit., p. 44 (originally published in Ann Goldstein and Anne Rorimer, *Reconsidering the Object of Art, 1965–1975*, exhibition catalogue, Los Angeles Museum of Contemporary Art, 1995).

non-artistic status, documenting earthworks (e.g., Robert Smithson) or actions (e.g., Vito Acconci). But as the confrontation of *Four Basic Kinds of Straight Lines and Their Combination* (1969) and *Brick Wall* (1977) shows, photography increasingly loses its connection with the reality it depicts, becoming an autonomous conceptual tool. That phenomenon is discussed in Nancy Foote's famous 1976 essay "The Anti-Photographers," for example. In the section focusing on the Bechers, Foote stresses the fact that "Bernd and Hilla Becher ignore the architectural or engineering achievements that make up their work [i.e., the depiction], photographing them so as to categorize types, compare similar formal elements, and arrange them in sequences [...]. The Bechers claim not to care whether or not the resulting grids of images are works of art; nevertheless, their relevance to current art ideas [i.e., photography as a conceptual tool] is inescapable."[8] The autonomous self-reflexive image used in the context of serial or typological arrangements thus increasingly prevails in conceptual strategies, more than the image as strict "document."

The increasing autonomy of the photographic image from its referent has clearly contributed to its institutionalization and its convergence with conceptual art,[9] primarily through the set of rules which have been used to achieve that autonomy: grid constructions, typologies, set camera angles, clearly defined frames and frontal constructions offer the formal preconditions which allows the photo-conceptual reading of these depictions. The formal contingencies resulting from that strict setting play a key role in the dialogue *between* an autonomous image [Bild] and a depiction connected to something that is portrayed [Abbild]. The application of these rules and protocols also epitomizes, to a certain extent, a middle ground between the concept and the object, as their output can be interpreted as a (metaphorical) space *between* image and depiction. That space is explicitly exemplified by Jan Dibbets' visualizing experiments of the *Perspective Drawings* series (1969, Fig. 36).[10] The Dutch artist photographically records a trapeze drawn on the wall, materializing a square, which only exists in that interstice. That space is also enacted implicitly by Victor Burgin's *Photopath* (1969), in which several representational layers merge into a dialogical visual model. The British photographer stresses the contiguity of reality and its depiction with his 1:1-scale photograph of a floor, laid out on that very floor, superimposing both "layers." Through various strategies, Burgin, Dibbets and LeWitt consequently

8   Nancy Foote, "The Anti-Photographers," *Artforum*, Vol. 15, No. 1, September 1976, reprinted in Douglas Fogle (ed.), *The Last Picture Show. Artists Using Photography. 1960–1982*, op. cit., p. 26–27.

9   For the description of the shift in the reception of the Bechers from industrial photographers to photo-conceptual artists, see especially Jeffrey Ladd, "'We had the feeling that people there understand what we do.' On the Reception of Bernd and Hilla Becher's Work in the United States 1968–1991," in Werner Lippert and Christoph Schaden (ed.), *Der Rote Bulli. Stephen Shore and the New Düsseldorf Photography*, op. cit.

10   The critic Marcel Vos emphasizes Dibetts' use of photography in order to "visualize," rather than to "represent." Marcel Vos, "Some Work of Jan Dibbets," *Flash Art*, No. 38, January 1973, p. 18. Quoted in Erik Verhagen, "Jan Dibbets. Du concept à sa visualization," in Danièle Méaux (ed.), *Protocole et photographie contemporaine*, St. Etienne, Publications de l'Université de St. Etienne, 2013.

address the images themselves, freed – to a certain extent – from what they depict; Burgin does so by creating a tautological resonance between image and referent, Dibbets stresses the intermediary space *between* image and referent, and LeWitt focuses on a serial permutation of depictions, in which the connections with the depicted wall is irrelevant, as the comparison with the drawings has shown.
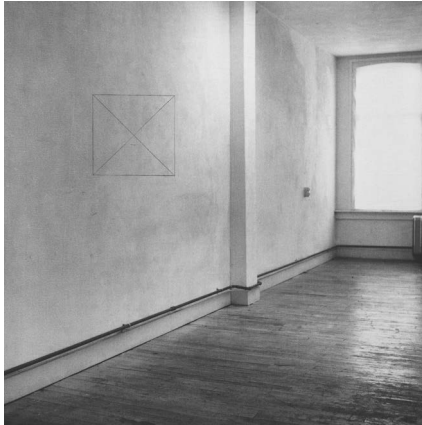

Fig. 36: Jan Dibbets, *My Studio 1, 1: Square on Wall Perspective Drawings series*, 1969
         (b/w photograph, 110 × 110 cm)

While these conceptual projects address the reflexivity of the photographic medium, the German, and more specifically the Düsseldorf context is defined by another set of directives. Outcome of the confrontation of reality with grid systems and orthogonal depictions, the Becher protocol can be singled out as a very specific set of rules, established for a specific documentary purpose. Adapted to a certain extent by the younger generation and subjected to a specific legitimating discourse addressing documentary forms, it proceeds differently than strictly conceptual artists, a differentiation the historiography of Düsseldorf clearly reflects: the work of the students of the Bechers is hardly ever connected to conceptual art, and even the association with Hans-Peter Feldmann, active in Düsseldorf, is rather rarely used as a source for understanding their work.[11] Methodologically, the clearly delimited parameters of the Becher protocol and the historical inscription of its connected discursive field – the German documentary paradigm –, can be confronted and evaluated in relationship with the work of Ruff, Gursky and Sasse, precisely *because* of their resilience in their work. Without addressing broader epistemological categories, the study of the protocol and its formal consequences – frontal

---

11   Peter Galassi mentions that Kaspar König organized workshops at the Kunstakademie Cologne, where Gursky had shown interest for Dan Graham and especially Jeff Wall. Gursky was also "aware" of the work of Hans-Peter Feldmann. See Peter Galassi, "Gursky's World," op. cit., p. 19 – 20. Eva Witzel's account on Gursky's influences is primarily based on Galassi. See Witzel Eva, *Die Konstitution der Dinge. Phänomene der Abstraktion bei Andreas Gursky*, Bielefeld, transcript Verlag, 2012, p. 312 – 313.

constructions, serial imagery, etc. – allows for the reconstruction of the relationship of the Becher students with what they depict, and more generally facilitates understanding of the reconfigurations their work embodies, in a very tangible manner. The connections between conceptual art and conceptual photographers further reveal the archaeology of the numerical formalization of reality: the use of protocoled and systematic photographic depiction in the 1960s and 1970s can be understood as an archaic model of computing, connecting the use of digital technologies in Düsseldorf to a "new" contextual field. To evaluate the central mechanisms of these transformations of photographic representation, the "two" models reflecting them – conceptual art *and* photography – ought to be consequently explored, leading to three separate questions: What role has photography played *in* conceptual art? How have transformations in the conception of photographic depiction impacted the work of the Becher students? And ultimately, how is photo-conceptualism connected with the digital codification of the world?
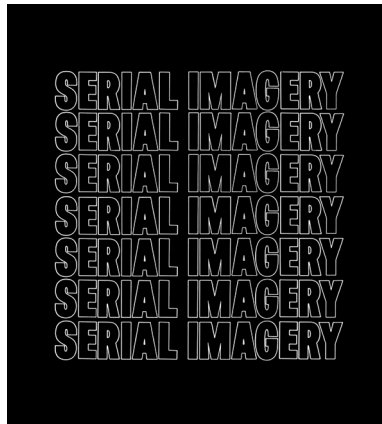

Fig. 37: Cover of John Coplans, *Serial Imagery*, 1968

This introductive part pursues a primarily formal-aesthetic approach, inscribing key proponents of conceptual art and photo-conceptualism into a theoretical framework in order to highlight specific mechanisms and strategies connecting them with Düsseldorf photography. The historical associations and contextual common ground will consequently be excluded from its articulation: Bernd and Hilla Becher constitute a strong yet indirect link between concept art and their pupils. As various scholars have already established, a scene quickly formed around major American and European artists at that time. Susanne Lange has highlighted the central role of Konrad Fischer in the circulation of minimal and conceptual art in Europe,[12] Armin Zweite the general

---

12   Susanne Lange, *Was wir tun, ist letztlich Geschichten erzählen … Bernd und Hilla Becher. Eine Einführung in Leben und Werk*, Munich, Schirmer/Mosel, 2005.

Düsseldorf context before Bernd Becher's teaching at the Kunstakademie[13] and Gerald Schröder the reception of the Bechers in Germany and their relationship with conceptual art.[14] Numerous scholars have studied conceptual art more generally – Alexander Albero[15] or Jon Bird and Michael Newman[16] most prominently –, and reflected upon the key moments that gathered American and European artists and photographers. *Konzeption – Conception* in Leverkusen (1969) constituted an important point of convergence, where conceptualists such as Sol LeWitt, Joseph Kosuth, On Kawara, Lawrence Weiner and Jan Dibbets – many of which were presented at the *documenta 5* in 1972 in Kassel as well – would meet Ed Ruscha and Bernd and Hill a Becher.[17] By the early 1970s, most of the quoted artists were represented by a handful of gallery owners (Seth Siegelaub, Konrad Fischer, etc.) and were exhibited together by a relatively small number of curators (Klaus Honnef, Harald Szeemann, Pontus Hultén, etc.). Although the contextual elements could be productive for understanding specific aspects of the visual production of that period,[18] our articulation will primarily pursue interconnections at a formal and aesthetic level, reaching out to a more wide-ranging understanding of photographic *representation*, through the articulation between conceptual art and the Düsseldorf School.

Fig. 38: Cover of *Artforum*, March 1973

13   Armin Zweite, "Photographie et/comme art à Düsseldorf 1958 – 1976," in Armin Zweite and Fabrice Hergott (ed.), *Objectivités. La photographie à Düsseldorf*, op. cit.
14   Gerald Schröder, "Positionings. On the Reception of Bernd and Hilla Becher's Photographic Oeuvre in the Federal Republic of Germany 1965 – 1990," in Werner Lippert and Christoph Schaden (ed.), *Der Rote Bulli. Stephen Shore and the New Düsseldorf Photography*, op. cit.
15   See Alexander Alberro, *Conceptual Art and the Politics of Publicity*, Cambridge (MA), MIT Press, 2003, Alexander Alberro and Blake Stimson (ed.), *Conceptual Art. A Critical Anthology*, Cambridge (MA), MIT Press, 1999 or Alexander Alberro and Sabeth Buchmann, *Art after Conceptual Art*, Cambridge (MA), MIT Press, 2006.
16   Jon Bird and Michael Newman (ed.), *Rewriting Conceptual Art*, London, Reaktion Books, 1999.
17   The "discovery" of the Bechers in Europe by Robert Smithson, Douglas Huebler or Ileana Sonnabend is for example accounted for in Chris Balaschak, "Between Sequence and Seriality. Landscape Photography and Its Historiography in Anonyme Skulpturen," *Photographies*, Vol. 3, No. 1, March 2010.
18   The formal relationship between Ana Mendieta and the Bechers has, for example, never been investigated, despite her direct relationship with them. Mendieta was Carl Andre's lover, who was a very close friend of the Bechers.

1   CHRONOPHOTOGRAPHY, SERIAL ORDER AND TIME

Numbers, repetition and serial constructions, as they were formulated by numerous artists throughout the 1960s, are symptomatic of both Joseph Kosuth's linguistic and Sol LeWitt's processual conceptualism,[19] as the semiotic expression of language and as the mathematical formulation of an idea. Despite being per se anti-visual and anti-pictural,[20] repetition in serial compositions, in narrative forms or sequential constructions innervate multiple cultural productions in the 1960s and the 1970s. John Coplans' book and exhibition *Serial Imagery* (1968, Fig. 37) sought for such models in the history of the arts from Monet to Warhol, invoking in the catalogue as much Gertrude Stein's repetitive poetry as serial constructions in Beckett's plays.[21] He empathically concludes his essay, stating that "there are sufficient indications in the emergence of serial imagery over the past decade in the United States that the rhythms attendant upon the serial style ritually celebrate, if only obliquely or subliminally, overtones of American life,"[22] suggesting an environment in which serial orders were ubiquitous.[23]

That position is also explicitly enacted and critically approached by Dan Graham's *Homes for America* or physically and metaphorically deconstructed by Gordon Matta-Clarks' *Splitting* (1974): both address "serial" housing for low-income citizens, and more generally the social geography of architecture. Through various channels, chronophotography as a serial construction was also rediscovered at that time, by important art publications – the cover of the *Artforum* from March 1973 features an image of Eadweard Muybridge (Fig. 38) – and artists alike. The chronophotographic model is explicitly articulated by Sol LeWitt in his project for *Artists and Photographs*, edited by Marian Goodman in 1970, *Schematic Drawing for Muybridge II* or by Dan Graham in his text "Muybridge Moments" (*Arts*, February 1967). It is further enacted implicitly in numerous chronophotographic performance documentations such as Keith Arnatt's *Self-Burial* (1969), featured in *Life* magazine in August 1970. The magazine as "artistic" medium, used by numerous artists as an

19   See for example Alexander Albero, "Reconsidering Conceptual Art, 1966–1977," in Alexander Albero and Blake Stimson (ed.), *Conceptual Art. A Critical Anthology*, Cambridge (MA), MIT Press, 1999.

20   In his statement for *documenta 5* (1972), Robert Smithson for example stresses the importance of language in art against the visual: "I am for an art that takes into account the direct effect of the elements as they exist from day to day apart from representation." Robert Smithson, "Cultural Confinement," in Alexander Albero and Blake Stimson (ed.), *Conceptual Art. A Critical Anthology*, op. cit., p. 281. Originally published in *documenta 5*, exhibition catalogue, Kassel, 1972 and reprinted in *Artforum*, Vol. 11, No. 2, *October* 1972.

21   John Coplans, *Serial Imagery*, exhibition catalogue (Pasadena Art Museum, 1968), New York Graphic Society, 1968, p. 16.

22   Ibid., p. 18.

23   In the perspective of political philosophy, that specific context could be correlated with economical overtones of the "late capitalistic era." See Fredric Jameson, *Postmodernism or the Cultural Logic of Late Capitalism*, Durham, Duke University Press, 1991 and, in the more specific context of photography books, Shane McCord, *Pushing Books. The Bookwork as Democratic Multiple in the Late Capitalist Era*, master thesis (unpublished), Department of Art History, University of Concordia, Montreal, Quebec, Canada, 2008.

answer to the critical position toward institutions authenticating artistic production, incidentally bears serial characteristics itself. Such constructions also constitute the core of feminist conceptual art of the early 1970s, as the only exhibition displaying feminine conceptualists, titled *c. 7,500*, curated by Lucy Lippard in 1973 (Californian Institute for the Arts, Valencia), has shown. Numerous "motions" or "permutations" documented through serial photographs – such as Martha Wilson's *Breast Form Permutated*, Athena Tacha's *Expressions 1 (Study of Facial Motions)* or Ana Mendieta's *Untitled (Glass on Body Imprints – Face)* (all 1972, see Fig. 39) – not only echo the ascendance of chronophotography in a strictly formal manner, but re-enact its concepts, terminology (e.g., "motions") and programmatic approach.[24]

Numerous artists have theorized serial imagery as a sole concept, most prominently Mel Bochner. His text "The Serial Attitude," published in the December 1967 issue of *Artforum*, uses as its first argumentative example, in the second line of the text, "Edward Muybridge's photographs."[25] Clearly, the use of protocoled depiction plays a central role in his use of that particular example:

> *Serial ideas have occurred in numerous places and in various forms. Muybridge's photographs are an instance of the serialization of time through the systematic subtraction of duration from event. Muybridge simultaneously photographed the same activity from 180°, 90°, and 45° and printed the three sets of photographs parallel horizontally. By setting up alternative reading logics within a visually discontinuous sequence he completely fragmented perception into what Stockhausen called, in another context, a "directionless time-field."[26]*

While the concept of protocol itself is here emphasized, Bochner further insists on the improvements made by Etienne-Jules Marey. His camera based on Gatlin's machine gun could take 120 photographs a second and could, "by placing a clock within camera range, obtain [...] a remarkable 'dissociation of time and image.'"[27] While the Bechers'

24   The convergence of conceptual and feminist art has until recently hardly been studied, although a multitude of body typologies can be found in the 1970s in the work of feminist artists such as Ana Mendieta, Martha Wilson, Hannah Wilke, Annette Messager and Eleanor Antin. The role Lucy Lippard played in its enactment has recently undergone a new curatorial and historiographical impulse, as numerous exhibitions and publications attest. See especially Cornelia Butler et. al., *From Conceptualism to Feminism. Lucy Lippard's Numbers Shows 1969–74*, New York/London, Afterall Books, 2012 and Catherine Morris and Vincent Bonin (ed.), *Materializing Six Years. Lucy R. Lippard and the Emergence of Conceptual Art*, Cambridge (MA), MIT Press, 2012, which results from an exhibition at The Elizabeth A. Sackler Center for Feminist Art and which investigates Lippard's curatorial and editorial work before she explicitly engaged in feminist criticism around 1973. See also Jayne Wark, "Conceptual Art and Feminism. Martha Rosler, Adrian Piper, Eleanor Antin, and Martha Wilson," *Woman's Art Journal*, Vol. 22, No. 1, Spring-Summer 2001.

25   Mel Bochner, "*The Serial Attitude*," in Alexander Albero and Blake Stimson, *Conceptual Art. A Critical Anthology*, Cambridge (MA), MIT Press, 1999, p. 22. First published in *Artforum*, December 1967, p. 28 – 33. See also Mel Bochner, "Serial Art Systems. Solipsism," *Arts Magazine*, No. 41, Summer 1967.

26   Ibid., p. 23.

27   Ibid., p. 24.

typological images are submitted only to "one" protocol – the parameters defining the relationship between the object and its depiction – chronophotography also bears a transversal protocol: time. Bochner's emphasis on Marey's tool suggests that this particular aspect had to be controlled. Serial order had to be defined solely by an idea, and not be subordinate to a superior structure such as time, which could potentially undermine its existence: as time is infinite, there can only be continuity, which mathematically prohibits certain serial constructions.

Fig. 39: Ana Mendieta, *Untitled (Glass on Body Imprints – Face)*, 1972 (6 photographs, 20.3 × 25.4 cm each)

The importance of chronophotography in that period and its declination by numerous artists in the American context, shows to which extent its protocoled dimension, its subordination to a defined set of rules, proved appealing both conceptually and visually,[28] despite the anti-visual attitude of concept art. The illustration of "Paragraphs on Conceptual Art" (1967) with the photographs of a painter associated with pop art, Ed Ruscha – his work *Every Building on the Sunset Strip* is featured next to Eva Hesse, Sol LeWitt or Robert Morris – shows how the mechanical use of photography, submitted to a set protocol (in this case the depiction of any building on one particular street, automatically shooting with a camera mounted on a driving car)[29] and connected to vernacular subjects, ought to polarize the interest for the medium by conceptual artists. As photography was at the time associated with mass media rather than art, it embodied an ideal

28 Among artists, only relatively few critical voices questioned Muybridge's importance and relevance at the time. The most famous was experimental filmmaker and photographer Hollis Frampton, who realized with Marion Faller various studies on *Vegetable Locomotion* (1975), explicitly making fun of Muybridge's *Animal Locomotion*. His famous essay published in *Artforum* in March 1973 focuses on Muybridge's impulses, which led him to shoot (and kill) his wife's lover and whose "obsession [...] drove him [...] to make [sequences] by thousands." See Hollis Frampton, "Eadweard Muybridge. Fragments of Tesseract," *Artforum*, No. 11, Vol. 7, March 1973, p. 51 – 52.

29 Sylvia Wolf, *Ed Ruscha and Photography*, exhibition catalogue (Whitney Museum of American Art, New York, 2004), Göttingen, Steidl, 2004, p. 139 – 40.

documentational and experimental tool. Its use by American artists also had European equivalents, despite the fact that they were not necessarily acknowledged in the United States at that time.
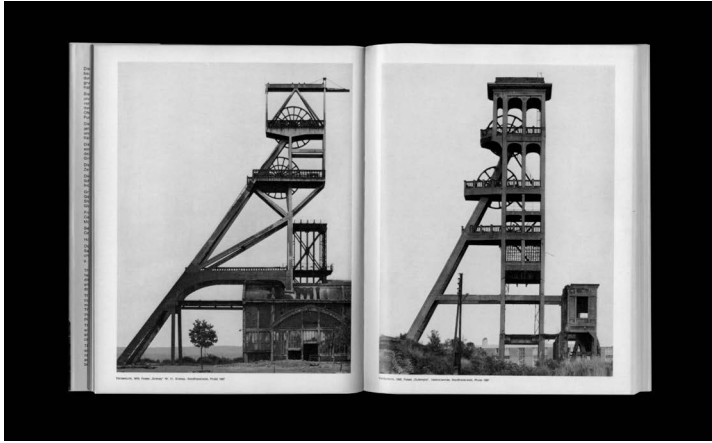

Fig. 40: Bernhard and Hilla Becher, *Anonyme Skulpturen*, Düsseldorf, Art-Press Verlag, 1970, double-image layout (image from *Bernhard und Hilla Becher. Ephemera and catalogues*, edited by Antoine de Beaupré, Paris, Galerie 213, 2010)

In his *Bilder* series (1968 – 1976), the Düsseldorf born "photographer"[30] Hans-Peter Feldmann assembled cheap, unsigned and unnumbered little books with vernacular imagery. He predetermined the number of images, which provided the generic title of every book – *11 Bilder* shows eleven sets of women's knees; *1 Bild* a zeppelin.[31] The images in *3 Bilder* are replaced by description, enacting a similar strategy.[32] One of the first acknowledgements of that proximity is yet again displayed in Volker Kahmen's *Fotografie als Kunst* which, in the illustration section, establishes a body of work based on serial imagery. He confronts Feldmann with Ruscha, Bruce Nauman, August Sander, the Bechers, Eadweard Muybridge or Jan Dibbets,[33] reflecting on the impact of protocols (frontal construction and serial configuration) and their (supposedly) trans-historical expression. As chronophotography as pervasive model seemingly structures all subsequent visual patterns, the impact of its protocoled depiction on ensuing imagery ought to be further defined in order to understand a yet to be developed strategy of the young generation of Düsseldorf photographers, the "single-image typology" (see p. 328 and following).

30 Trained as a painter and mostly using appropriated material, Feldmann challenges the very notion of photography, which remains his primary medium in the 1960s and 1970s.
31 Or a coat, as *1 Bild* exists in two versions.
32 See Hans-Peter Feldmann, *Bilder. Pictures*, Cologne, 3 Möven Verlag and Verlag der Buchhandlung Walther König, 2002 (1975).
33 Volker Kahmen, *Fotografie als Kunst*, op. cit., p. 204 – 224.

2 SERIAL CONSTRUCTIONS, GRIDS AND REPETITIVE PATTERNS

Serial constructions in conceptual photography, recorded feminist body permutations, Ed Ruscha's bookwork[34] and Bernd and Hilla Becher's photographs, are predominantly expressed in two sometimes combined forms: the typological grid and the book. The grid can be visible in exhibition displays, juxtaposing and confronting discrete images. Its comparative mechanisms are primarily visible through a large superordinate image, based on several smaller ones. The book as a serial medium operates in a linear temporality, combining photographs in sequences. Their combinatory interrelations are in the first case activated by browsing through the pages, and not by the selective action of the eye looking at one image. Grid patterns can also be rendered through specific layouts. The comparative mechanism can be operative in one single page (i.e., as a typology), but can also work by "continuously" confronting single images on opposite pages, "forcing comparative study."[35] The publishing in 1970 of the Bechers' *Anonyme Skulpturen* by the Düsseldorf-based Art-Press Verlag (Fig. 40) was the first opportunity for the couple to design a book the way they imagined it, as many publishers who had approached them would not let them choose formats or image presentation.[36] The outcome of the collaboration – the modes of presentation and the concept of anonymous sculptures it conveys –, is commonly interpreted as their most important statement to date, and it remains one of the key moments of their history.[37] These serial forms in publishing and editing have played a key role in conceptual art and photo-conceptualism as well. LeWitt's, Bochner's and Feldmann's bookwork – explicit answers to the "institutional critique" their strategies embody[38] – constitutes an important or even predominant aspect of their respective oeuvres and is the chief expression of serial mechanisms. But books as autonomous artistic works play a rather minor role in the Bechers' and their

34   For the original use and definition of the concept of the book *as an artwork* (bookwork), see Ulises Carríon, "Bookworks Revisited," in *Second Thoughts*, Amsterdam, VOID Distributors, 1980 and Clive Phillpot "Books, Bookworks, Book objects, Artists' Book," *Artforum*, Vol. 20, No. 9, May 1982. For a history of the terminology used to describe artists' books, see Duncan Chappell, "Typologising the artist's book," *Art Libraries Journal*, Vol. 4, No. 28, 2003.

35   Chris Balaschak, "Between Sequence and Seriality. Landscape Photography and Its Historiography in Anonyme Skulpturen," op. cit., p. 27.

36   The publication was preceded by the journal *Kunst Zeitung*, No. 2, 1969 also titled "Anonyme Skulpturen" and realized by Eugen Michel (Michelpresse), which was distributed at Art Cologne. See Hilla Becher, interview by Chris Balaschak, August 19, 2008, quoted in Chris Balaschak, "Between Sequence and Seriality. Landscape Photography and its Historiography in Anonyme Skulpturen," op. cit.

37   Chris Balaschak, "Between Sequence and Seriality. Landscape Photography and Its Historiography in Anonyme Skulpturen," op. cit., p. 25 – 27.

38   See especially Benjamin Buchloh, "Conceptual Art 1962 – 1969. From the Aesthetic of Administration to the Critique of Institution," *October*, Vol. 55, Winter 1990.

students' photography, except in Jörg Sasse's work.[39] Their photo-graphic practice is dominated by single images or tableaus displayed in real space, either groups of images constituting a whole (e.g., the Bechers' typological constructions), unique photographs (e.g., most of Andreas Gursky's images) or unique photographs hung next to each other as a series (e.g., Thomas Ruff's small *Porträts*).

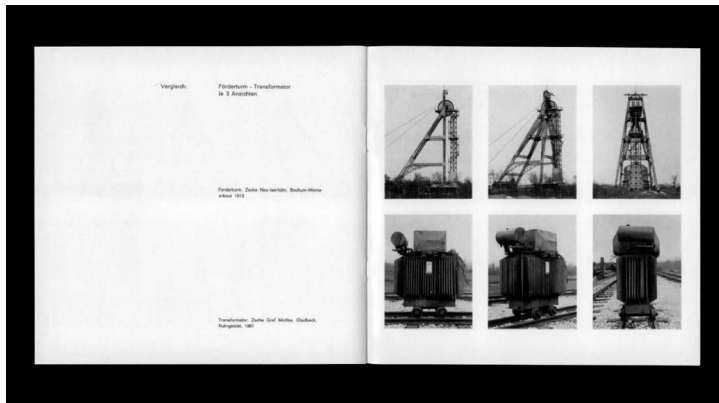Fig. 41: Double row typology (Munich, 1967)

Fig. 42: "Fake" typology, Aachen, 1971 (source: de Beaupré)

39   The rarity of bookwork in the Düsseldorf context ought to be mentioned. The Portikus edition of Andreas Gursky's *Paris, Montparnasse* constitutes his only artist's book, although he did contribute to the design of some editorial projects, such as the recent *Andreas Gursky. Bangkok* edited by Steidl in 2012. However, none of Thomas Ruff's books can be considered an artist's book. See *Andreas Gursky. Montparnasse*, exhibition catalogue (Portikus, Frankfurt, 1995), Stuttgart, Oktagon Verlag, 1995 and *Andreas Gursky. Bangkok*, exhibition catalogue (Museum Kunstpalast), Düsseldorf, 2012, Göttingen, Steidl, 2012.

In order to understand the position of the younger generation toward serial constructions, the strategy of the Bechers ought to be recapitulated, as considerable differences emerged in that respect. As Martina Dobbe has comprehensively shown, typology as "visual grammar" develops at a very early stage of the Bechers' collaboration, not long after Bernd Becher was still experimenting with collage as a combinatory form.[40] In their first solo exhibition in the Galerie Nohl in 1963 in Siegen, the couple already showed double rows of individual images, similar to their "Industriebauten 1830 – 1930" in 1967 (see Fig. 41). These compositions would rapidly evolve into the superposition of three rows with three photographs each to produce a square comparative project with nine images. These multiple displays would eventually lead to the merging of variable numbers of single images (9, 12, etc.) into "tableaus," perceived as one whole.[41] The typological and comparative character of these image groups or tableaus eventually underwent structural changes itself, as "real typologies" articulating comparable objects such as half-timbered houses from the Siegenerland evolved into a composite model, as is exemplified in the multitude of houses of "typological" projects such as *Fachwerkhäuser Südwestdeutschland* (1990) or *Vergleiche technischer Konstruktionen* (Aachen, 1971, see Fig. 42). The depicted objects are not grouped into a grid in order to be compared – the houses of the *same* region probably constitute the most evident manifestation of that pattern –, but various elements are inserted into the pre-existing grid. Various exhibitions and publications, such as *Vergleiche technischer Konstruktionen* in 1971 (Comparisons of technical constructions),[42] follows that "false" typological pattern: the coal silos and the cooling towers of *Kohlesilo und Kühlturm, je 3 Ansichten* (1971) are articulated less because of a classificatory need – for an engineer or an architect there is no point in comparing these types – and more to confront the viewer with their visual character, exemplifying the shift between "anonymous architecture" and "anonymous sculpture."[43] Some projects even multiply typologies, as in the La Jolla exhibition catalogue (1974), in which four specific types of concrete water towers are compared (see Fig. 43).[44] The comparative mechanism itself, the articulation of discrete image and whole, gains in importance, a phenomenon that has undoubtedly contributed to their acceptance by conceptual artists, particularly in the United States. But these processes, stripped from a strictly comparative or typological character, will also considerably shape the work of the Bechers' students, as will be argued below.

40 Martina Dobbe, *Bernd und Hilla Becher. Fachwerkhäuser*, Siegen, Museum für Gegenwartskunst Siegen, 2013 (2001), p. 39 – 41.

41 Ibid., p. 41.

42 *Bernhard und Hilla Becher. Vergleich technischer Konstruktionen*, exhibition catalogue (Zentrum für aktuelle Kunst, Aachen, 4 – 26 March 1971), Aachen, Gegenverkehr e.V. Zentrum für aktuelle Kunst, 1971.

43 One might even argue that they stand as "anonymous images."

44 See *Bernd and Hilla Becher*, exhibition catalogue, La Jolla (California), La Jolla Museum of Contemporary Art, 1974. This was the first Becher catalogue published by a museum in the United States. See Antoine de Beaupré (ed.), *Bernhard und Hilla Becher. Ephemera and catalogues*, Paris, Galerie 213, 2010.
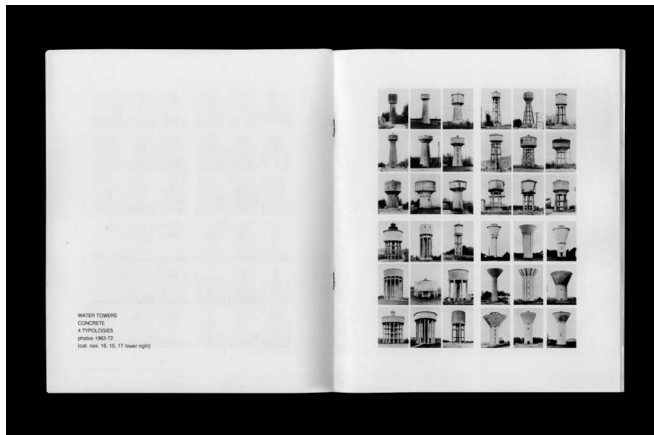
Fig. 43: Multiplied typology, La Jolla, 1974 (source: de Beaupré)

In these typologies, a similar process as in the previously mentioned project *Brick Wall* (1967) by Sol LeWitt occurs. In the midst of a group of images, every single photograph increasingly appears as an autonomous image freed from its referent, rather than a depiction; the frontal, two-dimensional, graphically pregnant construction creates a correspondence between the depicted reality (i.e., the brick wall, the silos, etc.) and the image, which enforces the visual [bildlich] against the depictive [abbildlich] effect.[45] The serial order plays a fundamental role in that process, as the individual picture remains attached to what it depicts if displayed separately. A key structure appears through the autonomization of the single image deriving from its inscription in a typological frame, one which as subject, concept and shape has played a central role in conceptual art, although its name is hardly ever mentioned: the grid. In Alexander Albero and Blake Stimson's six hundred page anthology of texts associated with conceptual art published between 1966 and the 1990s, which gathers most of the important writings of its key proponents and critics, the word only appears three times.[46] Mel Bochner's "The Serial Attitude" evokes "parallels of latitude, isobars, isothermal lines and other grid coordinate denotations, all serialized, [which] are further cases of the application of external structure systems [that] order the unordered."[47] Robert Smithson argues, when criticizing institutionalized art

---

45   The paroxysm of this movement from depiction toward image, which we lay out schematically for the sake of argumentation, would appear in the appropriation work of Richard Prince or Sherrie Levine in the late 1970s, based on photographs of pre-existing photographs. In their work, the object of depiction *is* an image, which creates a perfect correspondence. On a theoretical level, that shift could be read with Jean Baudrillard's concept of simulacrum, which states that knowledge is no longer based on our perception of reality, but through the apprehension of the "signs of the real," which have substituted the latter. See Jean Baudrillard, *Simulacra and Simulation*, op. cit., p. 4.
46   If one excludes Benjamin Buchloh's retrospective article establishing the concept of institutional critique in 1990.
47   Mel Bochner, "*The Serial Attitude*," in Alexander Albero and Blake Stimson (ed.), *Conceptual Art. A Critical Anthology*, op. cit., p. 27.

in general and figurative art in particular, that "a face or a grid on a canvas is still a representation."[48] Finally, Benjamin Buchloh addresses in an early text from 1978 the specific character of the layout of Dan Graham's magazine project *Homes for America* (1966) in relation to photography and text.[49] But despite its rather scarce mention or theorization, the grid is omnipresent in conceptual and photo-conceptual work of the time, as both compositional structure and as subject. Numerous typologies and comparative projects of Sol LeWitt, Mel Bochner and the mentioned feminist permutations depend upon that model, as much in photography (e.g., Bochner's *Crumble*, 1967) as in drawing and in sculpture (e.g., LeWitt's structures). Various book projects, which are often displayed also as one-page layouts, such as Ed Ruscha's *A Few Palm Trees* (1971) or Marcel Broodthaers' *Atlas* (1975), further enact the model based on a grid. Similar to the *Fachwerkhäuser*, the grid also pervades *inside* single images, even becoming in Sol LeWitt's photographic work an investigation of grid structures in real life.[50] Sol LeWitt was searching for grids, serial structures or organizational systems in vernacular expressions and in high culture manifestations: his interest for great architectural achievements are echoed in his pictures of grid structures embedded in Florence's illustrious St. Maria del Fiore Basilica which, in the photographic depiction found in *Photogrids* (1977 – 1978), intriguingly resonate with the cover of *Camera* 12 (1967),[51] addressing the relationship between photography and architecture. But despite the prevalence of grid structures throughout that period, the scarce mention of the term seems to indicate that as such, its implications were not necessarily investigated or considered worthy of examination.

48   Robert Smithson, "Cultural Confinement," in Alexander Albero and Blake Stimson (ed.), *Conceptual Art. A Critical Anthology*, op. cit., p. 281.

49   Benjamin Buchloh, "Moments of History in the Work of Dan Graham," in Alexander Albero and Blake Stimson (ed.), *Conceptual Art. A Critical Anthology*, op. cit., p. 377. First published in Benjamin Buchloh, "Moments of History in the Work of Dan Graham," in *Dan Graham. Articles*, Eindhoven, Van Abbemuseum, 1978.

50   That grid layout (2×2, 3×3 or 4×4) can be found in various projects such as *Four Basic Kinds of Lines and Color* (1971), his contribution to the *Xerox Book* (1968), *From Monteluco to Spoleto* (1976), *Photogrids* (1977 – 1978), *Sunrise and Sunset at Praiano* (1980) or *Autobiography* (1980). See for example Giorgio Maffei and Emanuele De Donno, *Sol LeWitt. Artist's Books*, Sant'Eraclio di Foligno, Viaindustriae, 2009.

51   This special issue of *Camera* entitled "Panoptique. Architecture et photographie," which Allan Porter considered "one of the most important of his life" (Nadine Olonetzky, *Ein Amerikaner in Luzern. Allan Porter und <camera> eine Biografie*, op. cit., p. 78 – 79), addressed the "wrong" perception of architecture through photography in terms of scale or three dimensionality, thus addressing the articulation of image and depiction. It combined photographs of important buildings (the Karnak Temple in Egypt, Le Corbusier's chapel in Ronchamp, Notre-Dame de Paris, etc.) with their blueprints on transparent paper, all at the same scale, aiming at providing a rigorous comparative approach (see Allan Porter, "Panoptique. Architecture et photographie," *Camera*, No. 12, December 1967, p. 5). Although there is no clue that Sol LeWitt actually saw this issue, it nevertheless interestingly reveals a convergence of interest, as depictions of geometrical patterns of reality (e.g., architecture) and alternative models of representation (e.g., maps or aerial photography) played an important role in his work.

3   ROSALIND KRAUSS AND THE GRID

Despite the omnipresence of grid structures in the visual production of the late 1960s and the early 1970s, the structure itself has not been theorized as it could be expected. The historical models of serial imagery (e.g., chronophotography or serial painting) and its various formal and conceptual declinations (e.g., sequences, typologies, permutations, etc.) have been addressed on a theoretical and practical level by numerous artists, discussing the role of time in its serial articulation (e.g., Mel Bochner) or examining the processual features of serial imagery (e.g., Sol LeWitt). The art historian John Coplans' early study *Serial Imagery* (1968) primarily discusses serial mechanisms built upon multiple images, considering the series or the sequence throughout various paintings of the same artist. Even though some examples are shown *as a grid* in the book, as for example Andy Warhol's 1964 *Liz Taylor* series (four images on each page, p. 134–135), Coplans does not address its structural specificities. The grid as underlying structure of such compositions has been extensively neglected as an autonomous concept, as the rare mentions of the term itself attest. It is only in 1979 that a text primarily addressing modern painting confronts what seems to be a defining component of conceptual art, the Bechers' photography and their students' work. In the summer 1979 issue of *October*, Rosalind Krauss publishes an article entitled "Grids,"[52] which constitutes the first attempt to circumscribe that particular notion in the context of the visual arts. The text was written a couple of years after the historical decade of conceptual art – Alexander Albero situates the period between 1966 and 1977[53] –, and it discusses the grid in exclusively non-photographic arts, primarily through painting (e.g., Agnes Martin's radical approach to grids), and to a certain extent sculpture, from the early twentieth century to the 1970s. Krauss' aim is to evaluate the relevancy of the grid in modern art, following its appearance in early twentieth-century painting, after which it "remained emblematic of the modernist ambition within the visual arts."[54] According to Krauss, the grid constitutes a key mechanism of modernist visual production because of its distancing from what she calls speech that can however to a certain extent be associated with the concept of mimesis:

> *Surfacing in pre-war cubist painting and subsequently becoming ever more stringent and manifest, the grid announces, among other things, modern art's will to silence, its hostility to literature, to narrative, to discourse. As such, the grid has done its job with striking efficiency. The barrier it has lowered between the arts of vision and those of language has been almost totally successful in walling the visual arts into a realm of exclusive visuality and defending them against the intrusion of speech.*[55]

52   Rosalind Krauss, "Grids," *Artforum*, Vol. 9, Summer 1979.
53   Alexander Albero, "Reconsidering Conceptual Art, 1966–1977," op. cit.
54   Rosalind Krauss, "Grids," op. cit., p. 50.
55   Ibid.

The distance from language and depiction – in the context of conceptual art, photographic depiction would be logically correlated with language – leads Krauss to claim that the grid constitutes an "antinatural, antimimetic, antireal"[56] structure which, in the context of modernist painting "declares the space of art to be at once autonomous and autotelic."[57] Her radical claim of autonomy and "withdrawal"[58] from reality and, in a paradigmatically postmodernist position, from history itself,[59] won't be endorsed or discussed as such here. The extremely complex context of emergence of the article and of Krauss' thought more generally, which both refutes Greenbergian formalism and medium specificity, and her nascent confrontation with the photographic, shall not be pursued either.[60] Rather, we aim to use her concept in order to highlight the specific context of the emergence of grids and serial forms, which her text could be symptomatic of.

A surprising characteristic of "Grids," which hardly mentions photography, lies in the theoretical and conceptual model it provides for understanding the prevalence of grid systems in the 1960s and 1970s. If we go back to the example of Sol LeWitt's *Four Basic Kinds of Straight Lines and Their Combination* (1969, Fig. 34), we can easily conclude that the drawing would correspond to Krauss' idea of an autotelic structure. The drawings express a predefined protocol – in this case the combination of four types of straight lines –, which does not have an existence outside the concept itself and its visual evidence. *Brick Wall* (1967), on the other hand, while exemplifying a similar strategy, retains a connection with what it depicts. As such, the grid can be seen as a structure operating between the object being depicted and the depiction. The comparison of these two differing visual outputs of a protocol does not aim to approach or differentiate drawing or photography ontologically, or to define an alleged medium specificity. Rather, it aims to address a systematization of depictive processes, which could be interpreted as the subsequent output of mechanization in industrial societies.[61] But although a changing epistemological context will be addressed, only the shifting modalities of photographic depiction shall be analyzed, limiting the scope of the analysis. From a photographic perspective, the use of grids appears central to the reconfiguration of mechanical representation, as the depicted reality is systematically – at least in the work of the Bechers – demarcated and geometrically oriented by grid systems. The rigorous Becher protocol,

56   Ibid.
57   Ibid., p. 52.
58   Ibid.
59   Ibid., p. 64. In a recent study on the grid, Eric de Chassey stresses the rupture of the modernist grid *in* history, rather than *with* history. See Eric de Chassey, "Après la grille," in Bernard Ceysson (ed.), *Abstraction/Abstractions – Géométrie provisoire*, exhibition catalogue, Saint-Étienne, Musée d'Art Moderne de St. Étienne, 1997 and François Bouchon, *Grille et complexité. Analyse de l'entrecroisement régulier de lignes dans l'histoire de l'art*, doctoral thesis (unpublished), University of St. Etienne, 2011, p. 15 – 16.
60   For a synthesis of these debates, see for example Johanne Lamoureux, "La critique postmoderne et le modèle photographique," *Etudes photographiques*, No. 1, November 1996.
61   See Sigfried Giedion, *Mechanization Takes Command. A Contribution to Anonymous History*, New York, Oxford University Press, 1970 (1947) and Lev Manovich, *Software Takes Command*, New York, Bloomsbury, 2013, introduction.

as well as numerous typological and serial compositions (e.g., Hans Peter Feldmann's 152 Bilder, 1971), both systematize the reproductive process, while enhancing the perception of photographs as images. In the case of Feldmann, the grid not only prohibits the potential transparency of the single photograph by juxtaposing it with many others. It further inscribes every portrait in a cultural history of such representational forms, comparison and repetition making the reference less fortuitous. In that particular example, the comparative displays or typological arrangement of an iconography that could be associated with family photography suggests a political context instead: the grids suggest Red Army Faction (RAF) wanted lists or – in a much more distant genealogy – anthropometry as a remote formal predecessor.

Although Krauss' text explicitly defines the grid against perspectival representations and mimetic forms, numerous analytical criteria corroborate a reading that is productive for the understanding of the grid in photography. Addressing the dispute on the centripetal or centrifugal nature of visual arts (i.e., the question whether a painting exceeds the limits of the frame or not), she argues that:

> *I have witnessed and participated in arguments about whether the grid portends the centrifugal or centripetal existence of the work of art. Logically speaking, the grid extends, in all directions, to infinity. Any boundaries imposed upon it by a given painting or sculpture can only be seen – according to this logic – as arbitrary.*[62]

That framework, in the context of typologies and frontal photography, for example, supports Andreas Gursky's strategy. *Paris, Montparnasse* (1993) not only extends the architectural reality by digital means, sewing two photographs together horizontally; it also suggests that extension by leaving the building continue above the limits of the picture, whose physical existence – the print is 350 centimeters wide – also reflects a search for a centripetal effect. The relevance of Krauss' model, not as a specific mechanism of modernist painting but as a conceptual framework addressing the systematization of depiction and its epistemological implications, can be demonstrated through confrontation of the model with the use of grid structures and raster grids in Düsseldorf photography, and through the model's connection with the photographic protocol.

62   Rosalind Krauss, "Grids," op. cit., p. 60.