



The evolution of
LEONARDO JOURNAL
 Celebrating 50 years of art, science
 and technology

50 YEARS  | **LEONARDO**
 WHERE IDEAS DON'T TAKE SIDES

April 2018

A SPECIAL MESSAGE FROM
LEONARDO


Dear Inge Hinterwaldner,

I hope you might be willing to put your thinking hat on and help Leonardo imagine our future over the next 50 years! As a supporter of Leonardo and our work, your input is invaluable.

Leonardo will be celebrating its 50th anniversary soon, marking the first published issue in 1968. How the world has changed. And with those changes, many goals of Leonardo's founders have been achieved. The international art/sci and art/tech communities of practice are thriving; university programs for hybrid art-science-technology professionals have emerged; companies are hiring "T-shaped" experts who bridge art, design, science and engineering disciplines; and artists can now write professionally about their own work, bypassing the art critics who insisted in the 1960s that "if you can plug it in, it can't be art."


In a moment of euphoria, I suggested to our board that we declare success and close the organization down! But our community still faces many problems and new opportunities have arisen in a world that is being disrupted by life-enhancing and life-threatening changes, from digital culture to climate change.

It's at this significant time in Leonardo's evolution that we are reaching out to you as a member of our community of practice to ask for your help and thoughts as we begin a



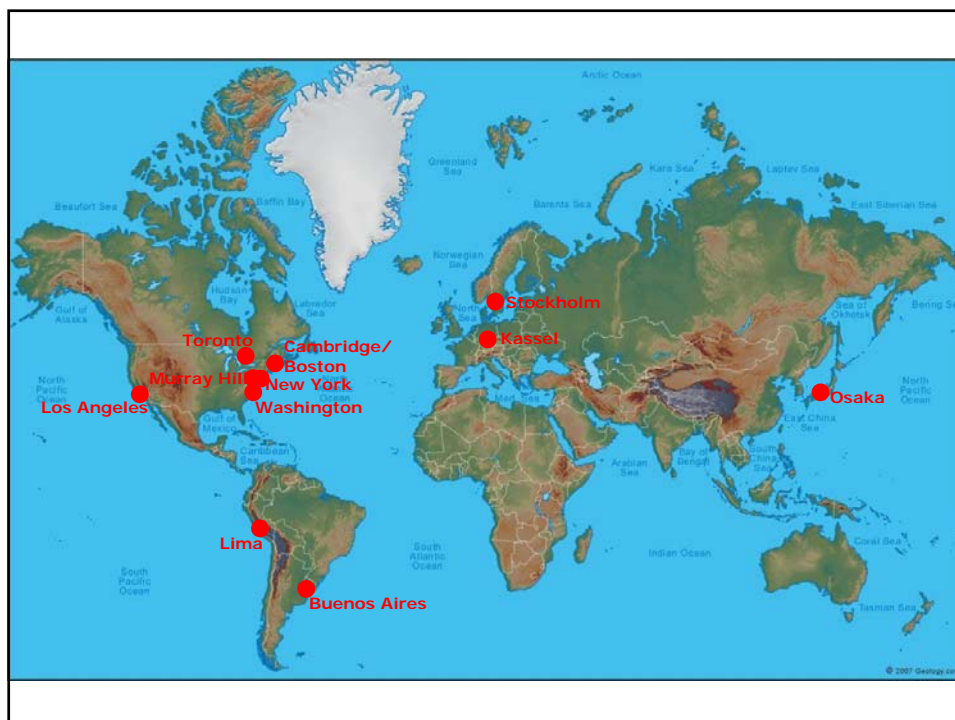
Roger Malina
 Executive Editor
 Leonardo@SAST

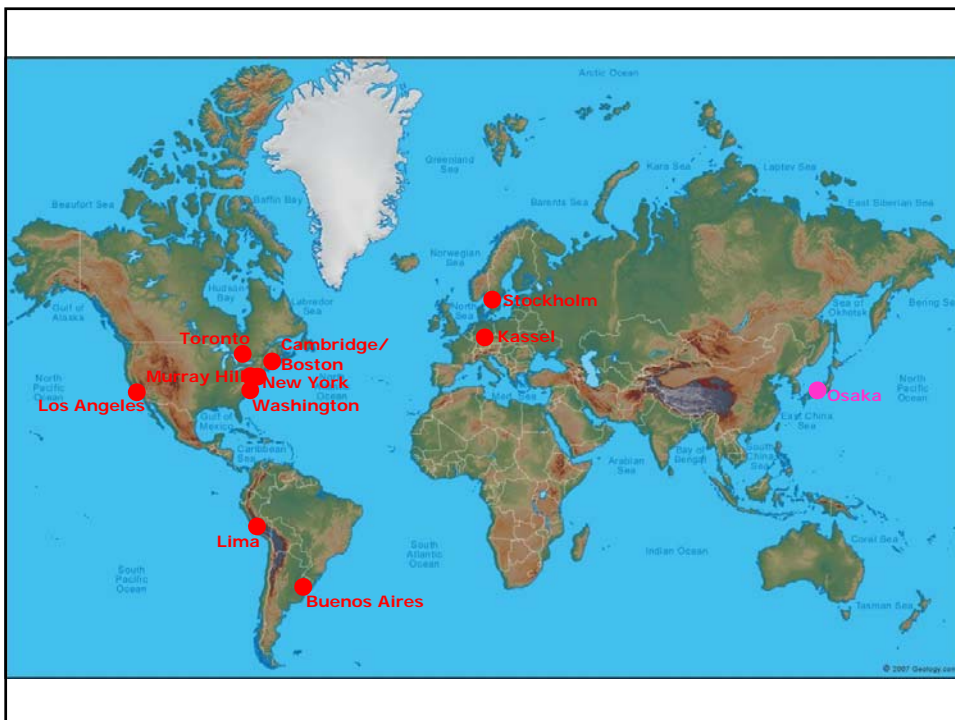
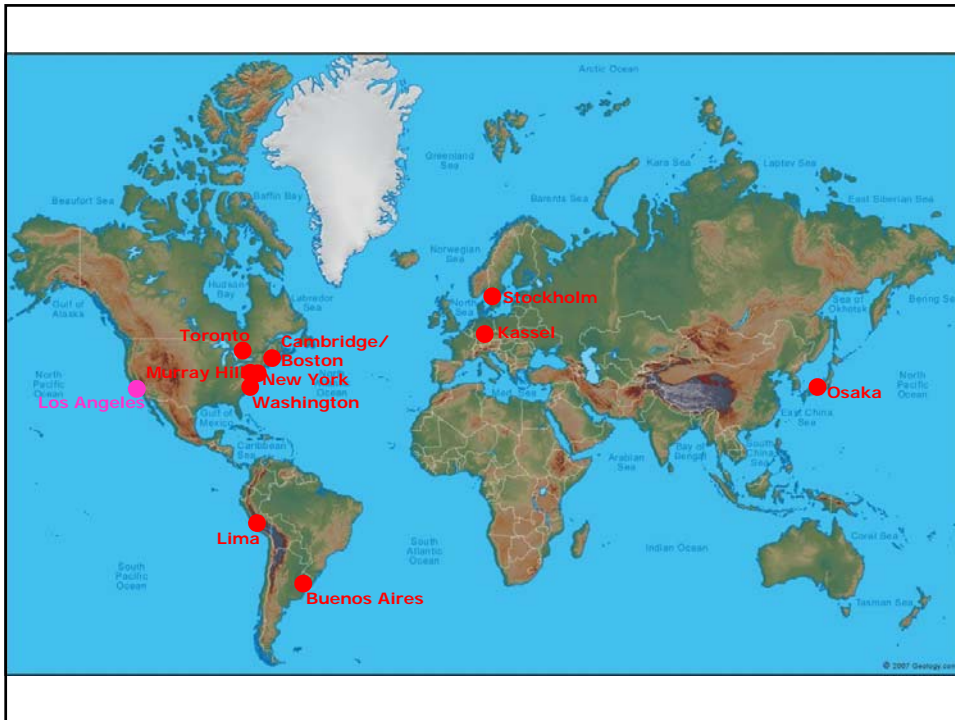
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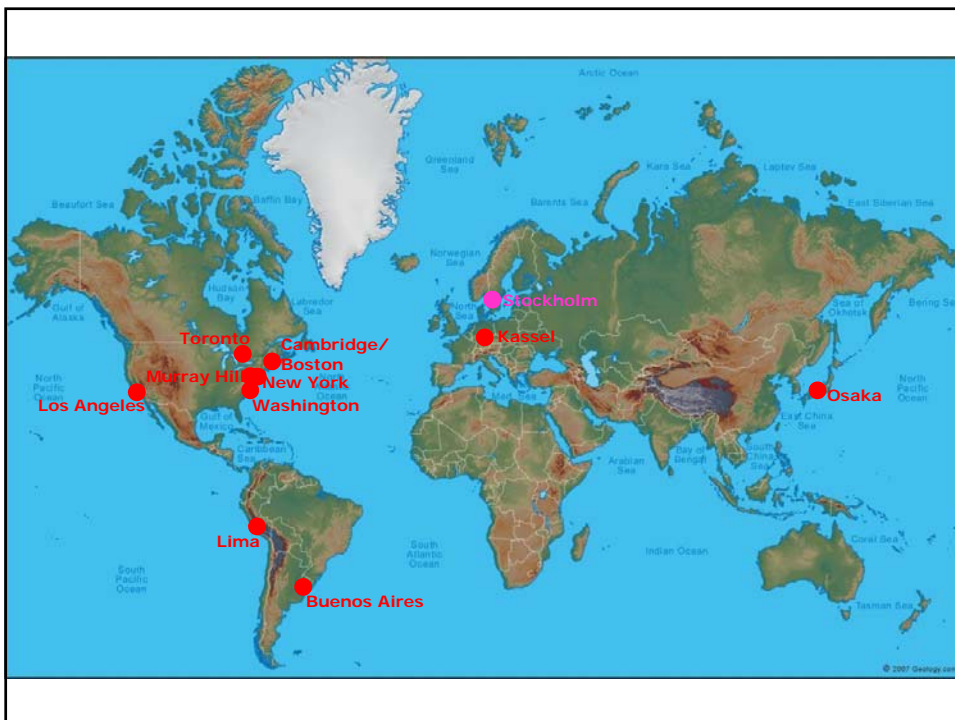
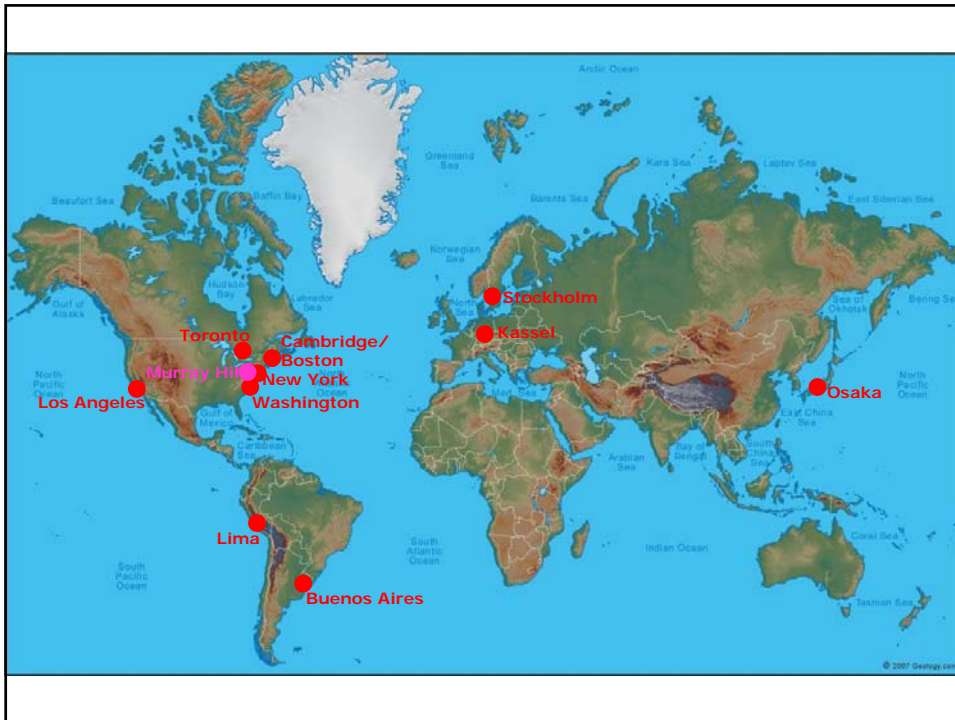


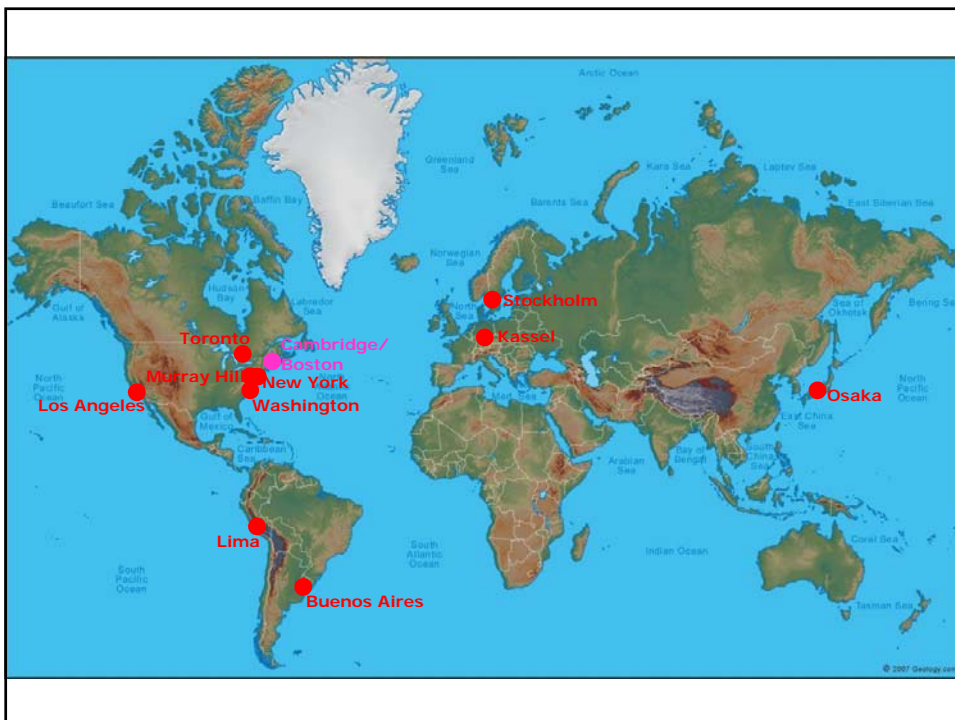
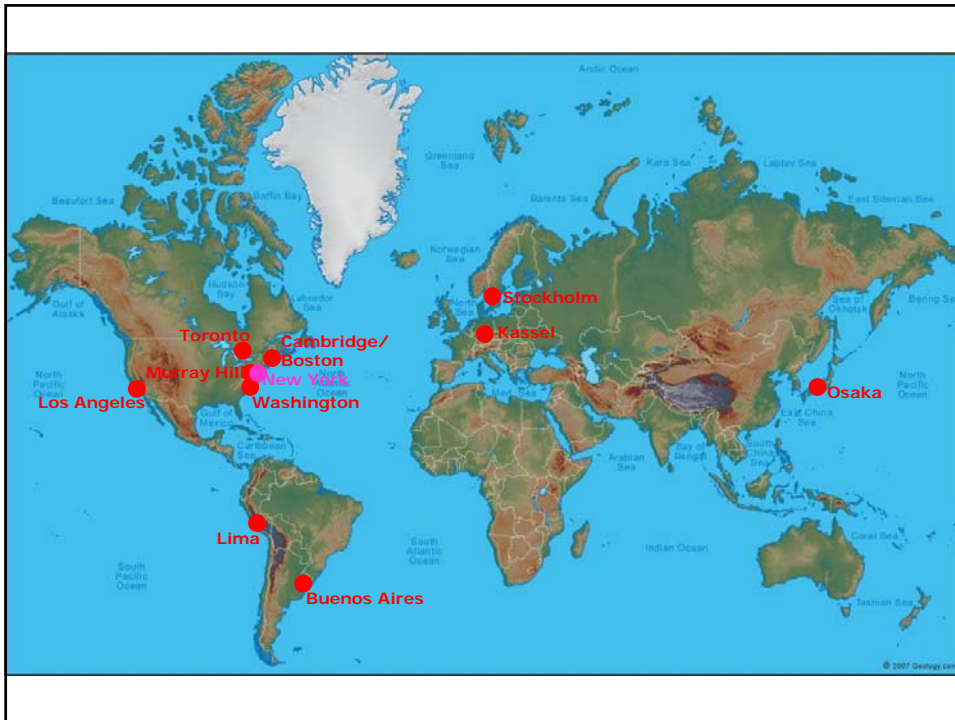
Roger Malina, Rundmail 18.11.2016.

Nr.	Datum	Thema
1	16.10.2018	Tinguely und Klüver – "Homage to New York"
2	23.10.2018	Experimentelles aus den Bell Telephone Laboratories
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10	15.1.2019	Sky Art am MIT und Centerbeam
11	22.1.2019	Art & Technology in Lateinamerika
12	30.1.2019	Art & Technology in Kanada
13	5.2.2019	Klausur













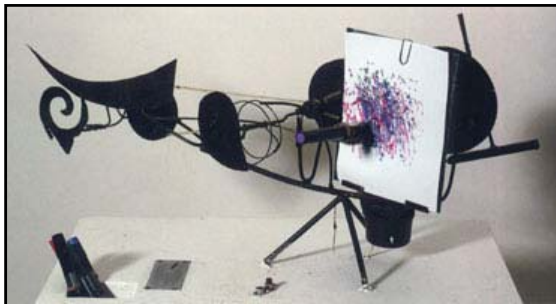
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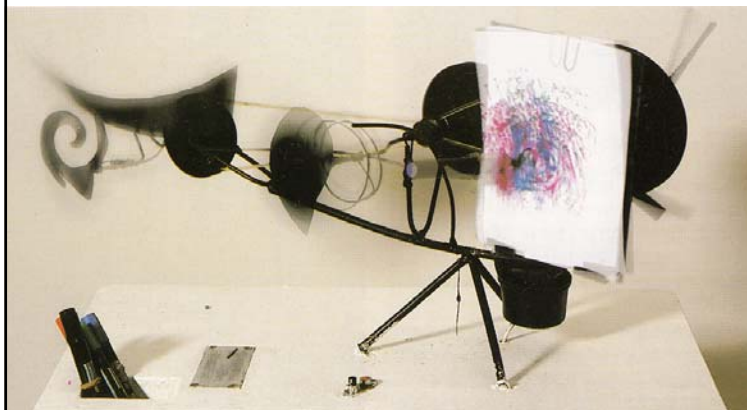
Jean Tinguely

<p>Kinetische Kunst</p> 	<p>AGAM BURY CALDER MARCEL DUCHAMP JACOBSEN SOTO TINGUELY VASARELY</p> <p>DU 6 AU 30 AVRIL 1955 VERNISAGE MERCREDI 6 AVRIL DE 17 A 21H.</p> <p>GALERIE DENISE RENÉ 124 RUE LA BOÉTIE, PARIS 8, ÉLYSÉES 82-17</p>	<p>Neuer Realismus</p> <p>Le Jeudi 27 octobre 1960, les nouveaux réalistes ont pris conscience de leur singularité collective. Nouveau Réalisme = nouvelles approches perceptives du réel.</p> <p>Yves Klein Marcel Broda Günther Rambow François Morel Gilbert Restany Amman Tinguely Hains Foufrempe</p>
<p>Gelbes Manifest (manifeste jaune), 1955. Initiator: Victor Vasarely.</p>	<p>NOTES POUR UN MANIFESTE</p> <p>Le mouvement cinématique est un mouvement qui se fait dans le temps et dans l'espace. C'est un mouvement qui se fait dans le temps et dans l'espace. C'est un mouvement qui se fait dans le temps et dans l'espace.</p>	<p>Manifeste des Nouveaux Réalistes, 27.10.1960. Initiator: Pierre Restany.</p>

	
	<p>Jean Tinguely: Rotozaza No. 2, 1967. Geschweißtes Alteisen, Plexiglas, Holzelemente, Acrylglas, Fahrradkette, Elektromotor 110 V, ca. 230 x 800 x 400 cm. (wiederaufgeführt: 2010)</p> <p>Jean Tinguelys "Rotozaza No. 3" im Schaufenster des Warenhauses Loeb, Bern, 1969.</p>



Marcel Duchamp mit
Méta-matic no. 8 in
der Galerie Iris Clert,
Paris. Juli 1959.



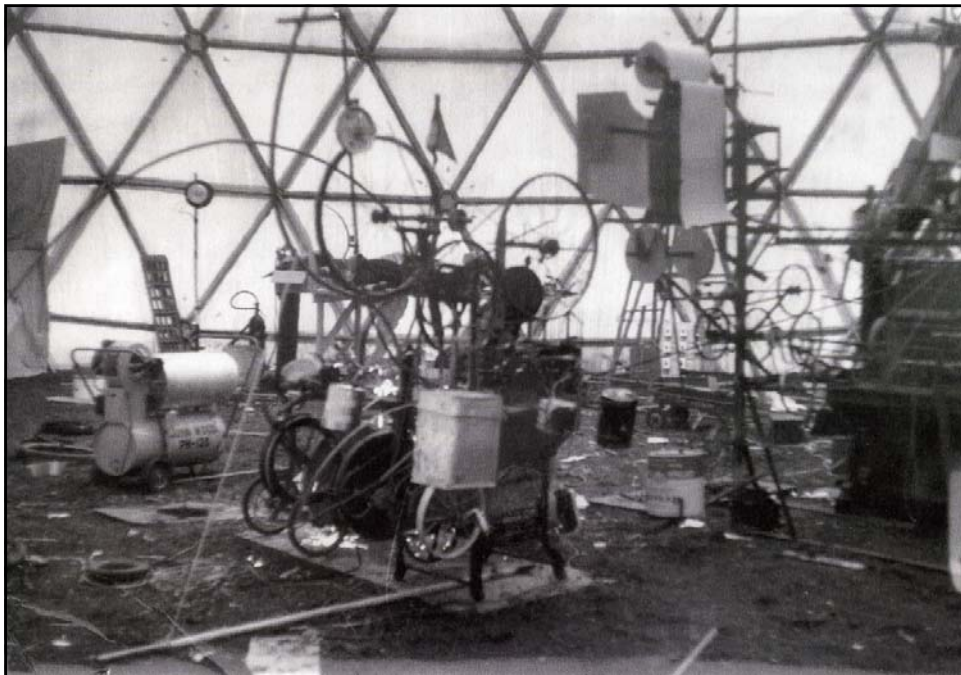
Jean Tinguely: Méta-
matic no. 8 (Meta-
Moritz), 1959.



Jackson Pollock als exponierter Vertreter des Abstrakten Expressionismus.



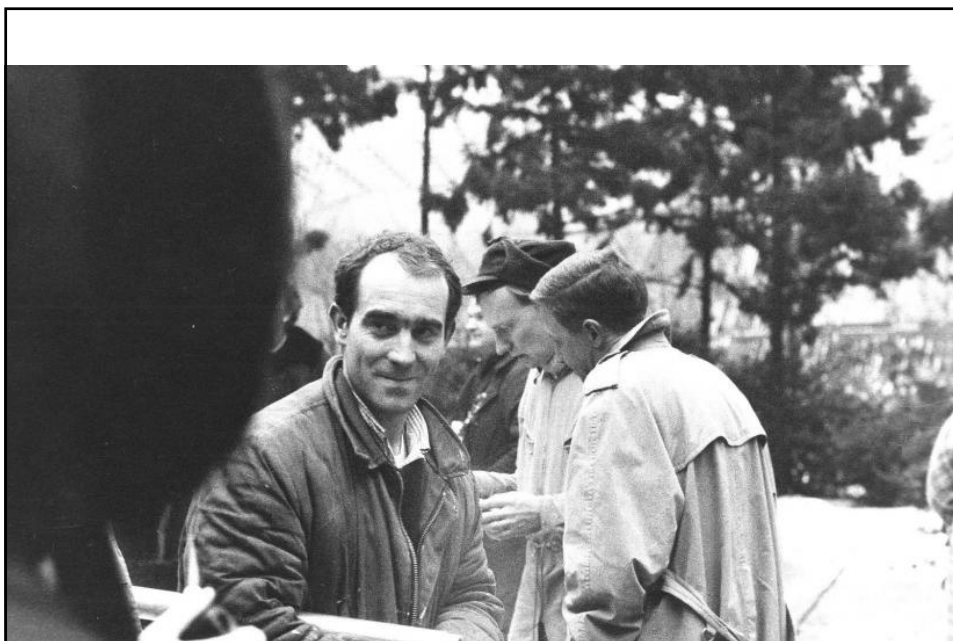
Donn Alan Pennebaker: Breaking it up at the Museum - Jean Tinguely, Homage to New York (1960).



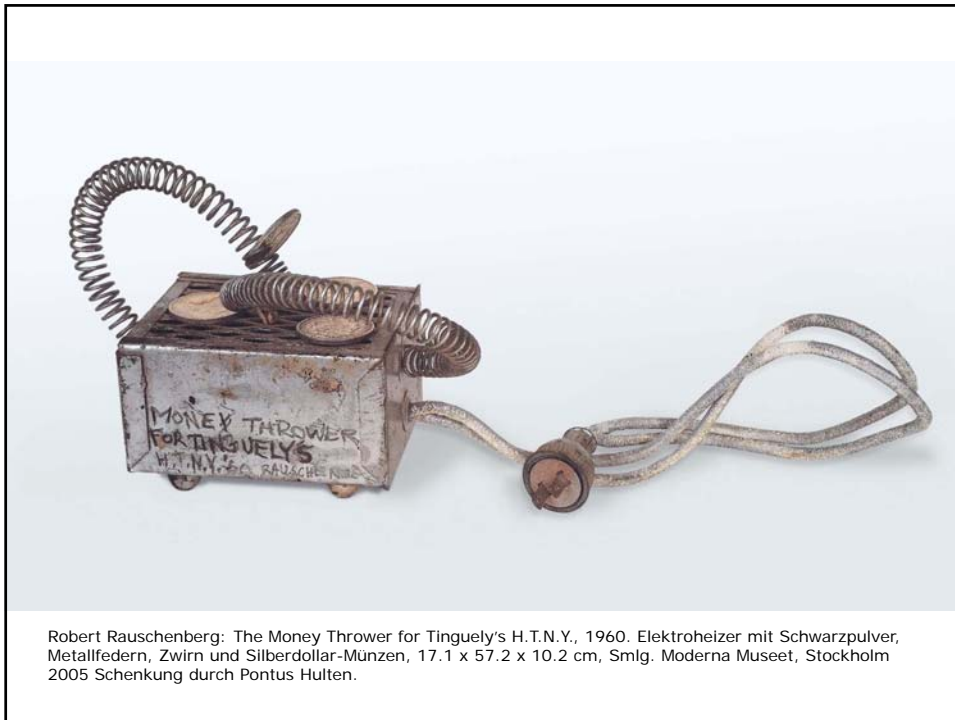
Jean Tinguely: Homage to New York, während der Entstehung im Buckminster Fuller Geodesic Dome, New York 1960.

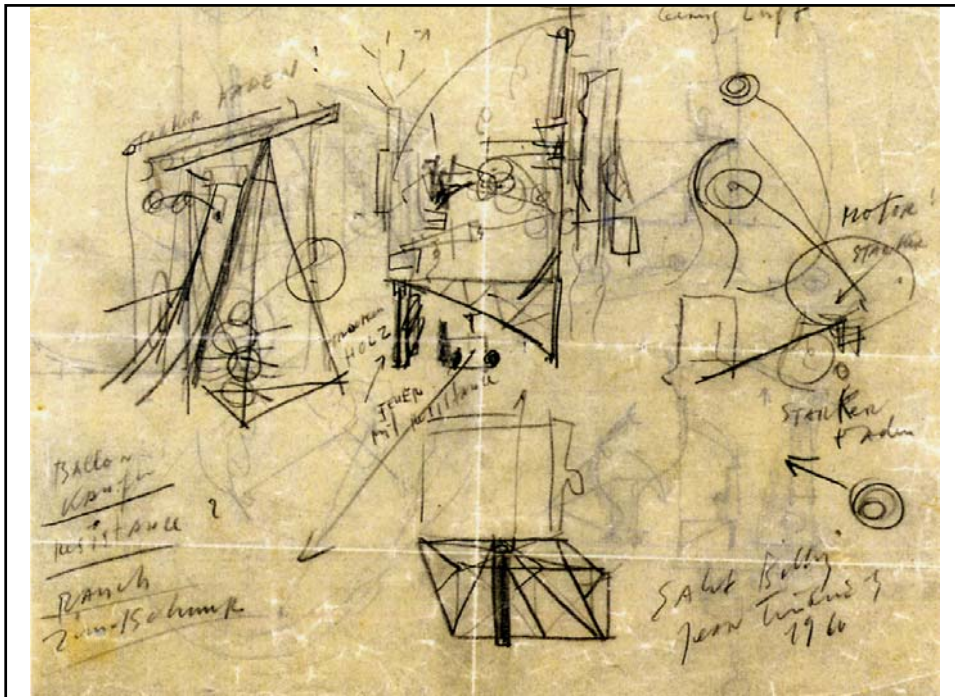


Installation von Tinguelys Homage to New York im Garten des MoMA. Rechts hinten steht Rauschenberg, Mann mit Hut und Schal: der Verwaltungsdirektor des MoMA, Richard H. Koch. Foto: David Gahr.

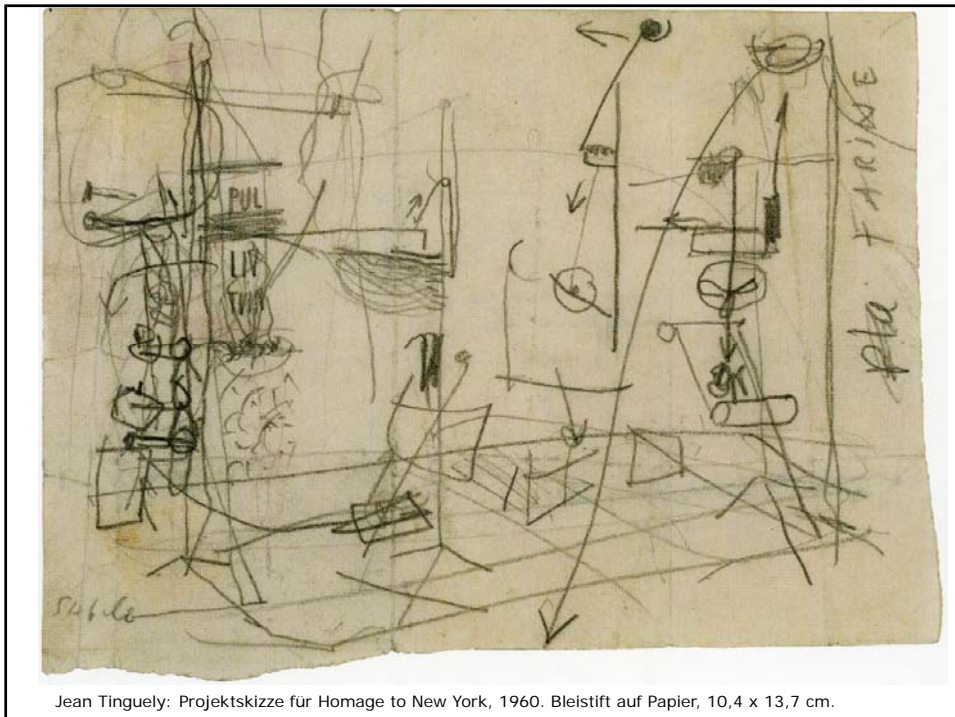


Jean Tinguely, Billy Klüver und Rauschenberg am 17.3.1960 im Garten des MoMA, bei der Installation von Tinguelys "Homage to New York". Foto: David Gahr.

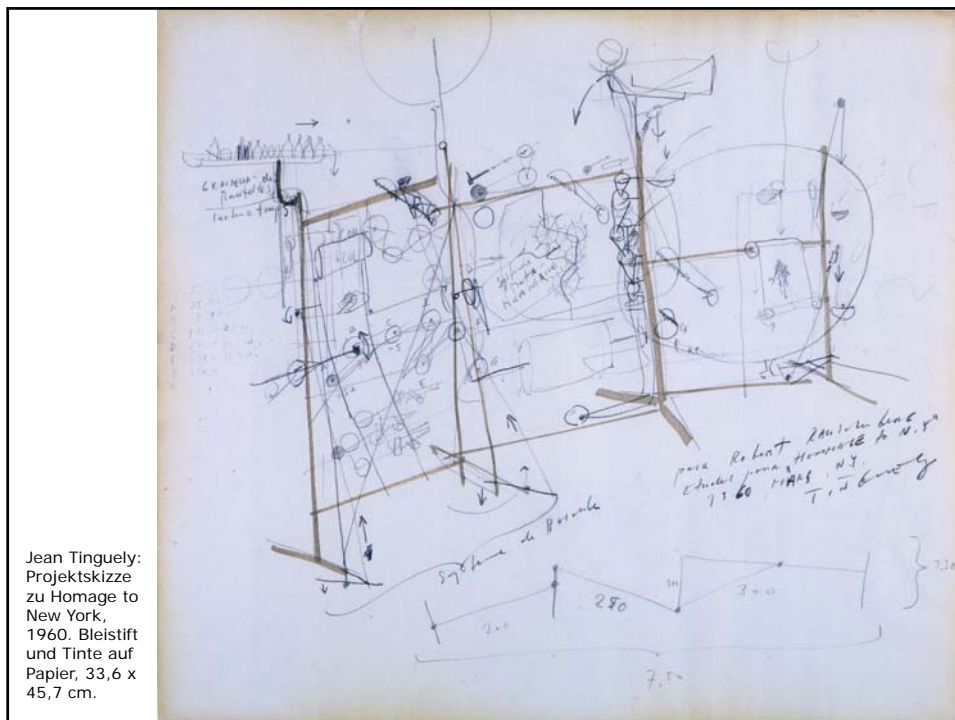




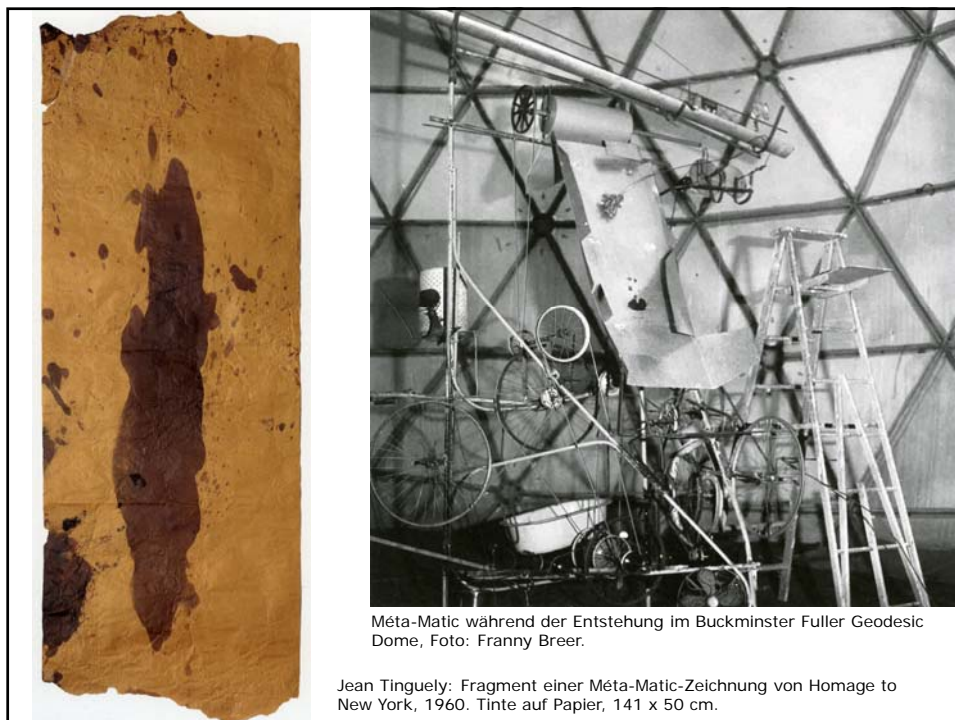
Jean Tinguely: Projektskizze für Homage to New York, 1960. Bleistift auf Transparentpapier, 21,5 x 27,7 cm.



Jean Tinguely: Projektskizze für Homage to New York, 1960. Bleistift auf Papier, 10,4 x 13,7 cm.



Jean Tinguely: Projektskizze zu Homage to New York, 1960. Bleistift und Tinte auf Papier, 33,6 x 45,7 cm.



Méta-Matic während der Entstehung im Buckminster Fuller Geodesic Dome, Foto: Franny Breer.



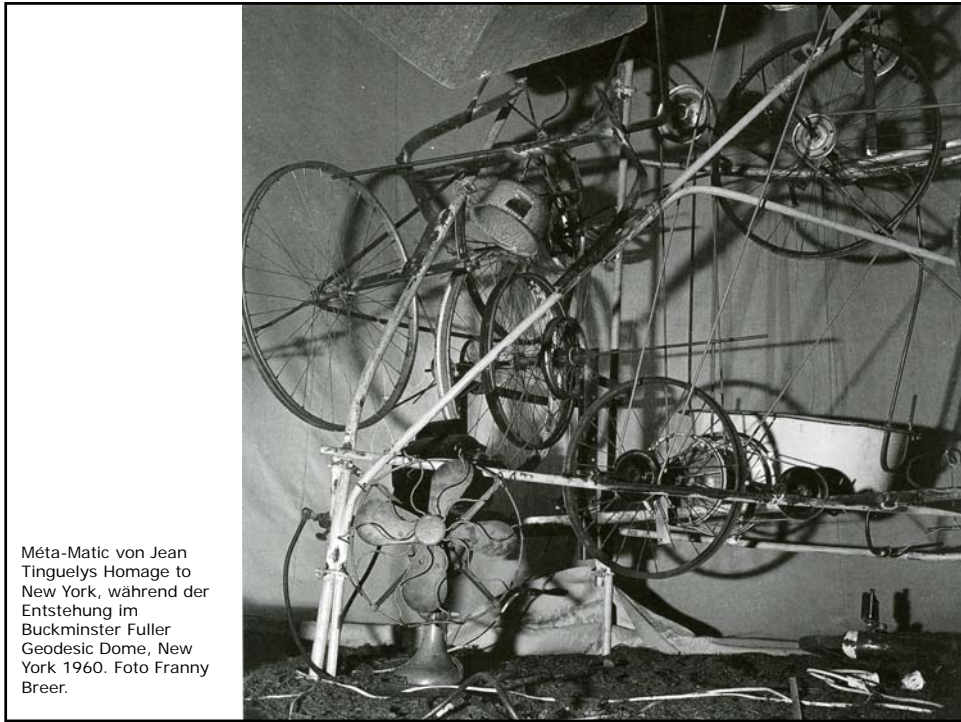
Jean Tinguely: Fragment einer Méta-Matic-Zeichnung von Homage to New York, 1960. Tinte auf Papier, 141 x 50 cm.



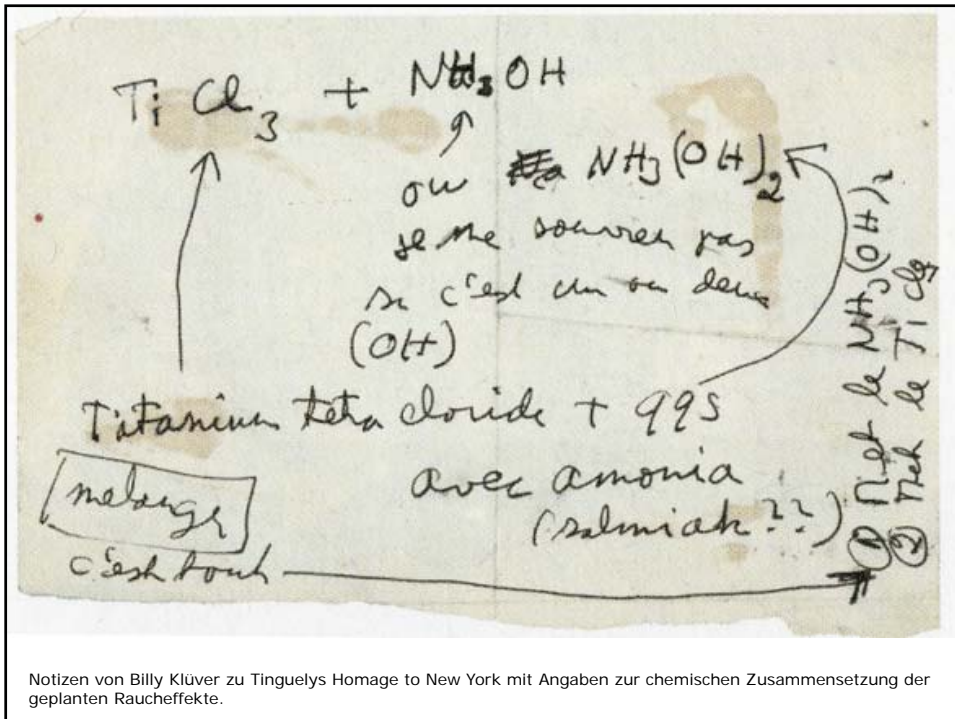
Robert Breer: Homage to Jean Tinguely's Homage to New York (1960). Filmstill.



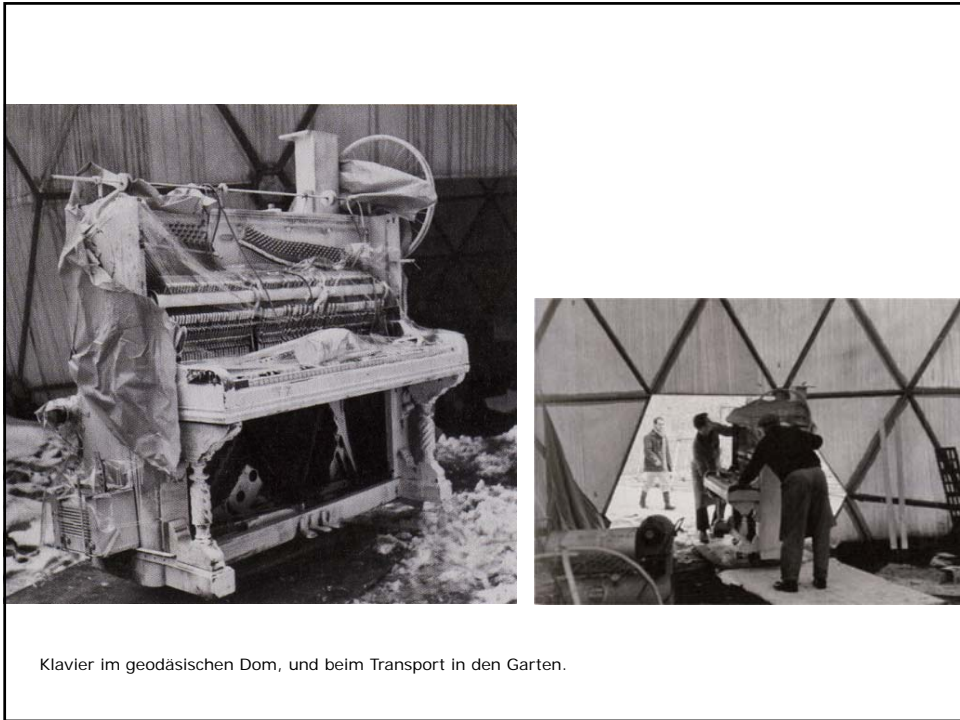
Robert Breer: Homage to Jean Tinguely's Homage to New York (1960). Filmstill.

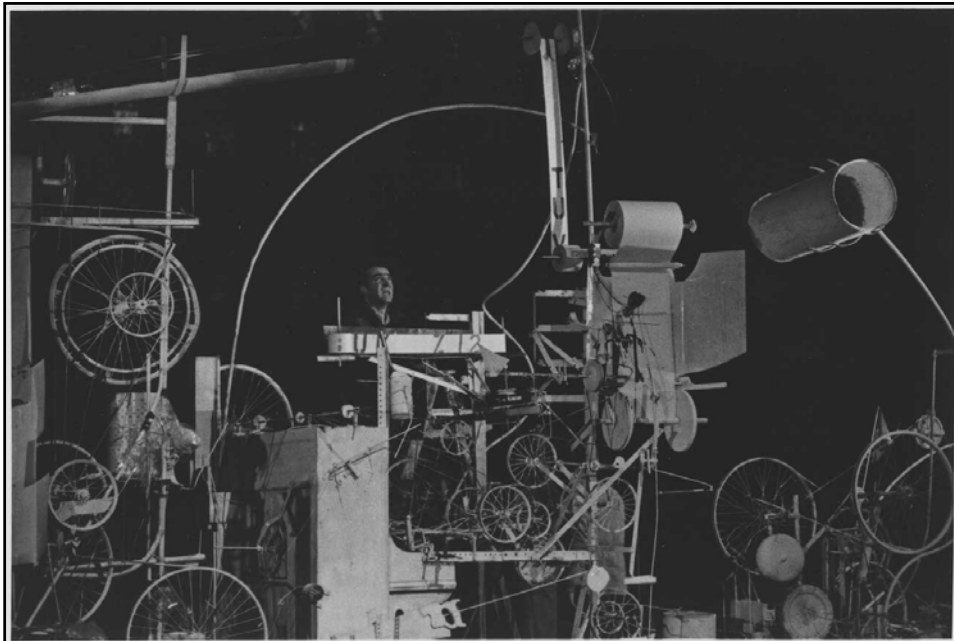


Méta-Matic von Jean Tinguelys Homage to New York, während der Entstehung im Buckminster Fuller Geodesic Dome, New York 1960. Foto Franny Breer.

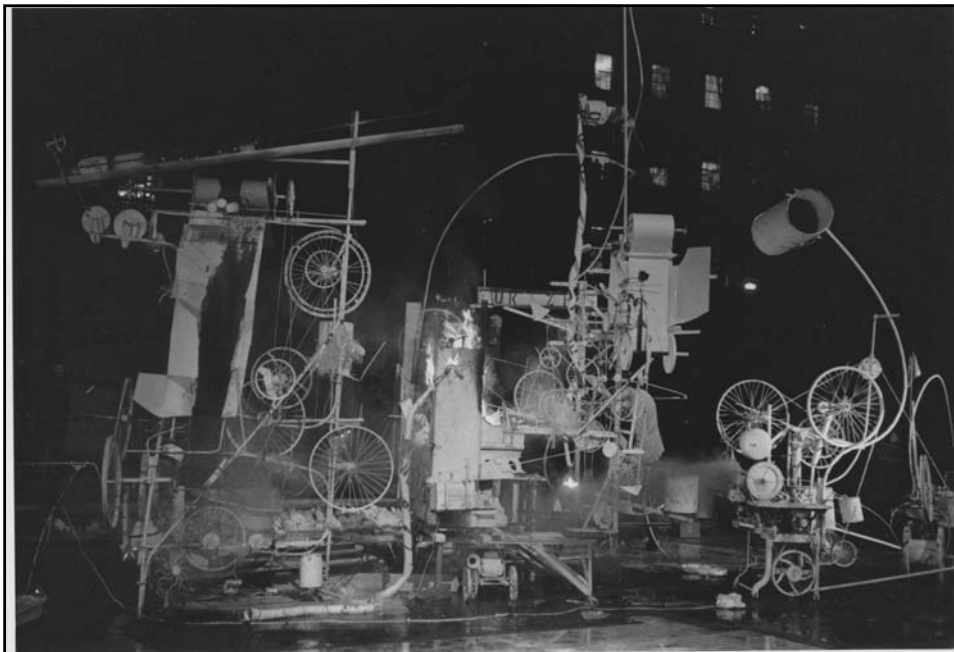


Notizen von Billy Klüver zu Tinguelys Homage to New York mit Angaben zur chemischen Zusammensetzung der geplanten Raucheffekte.

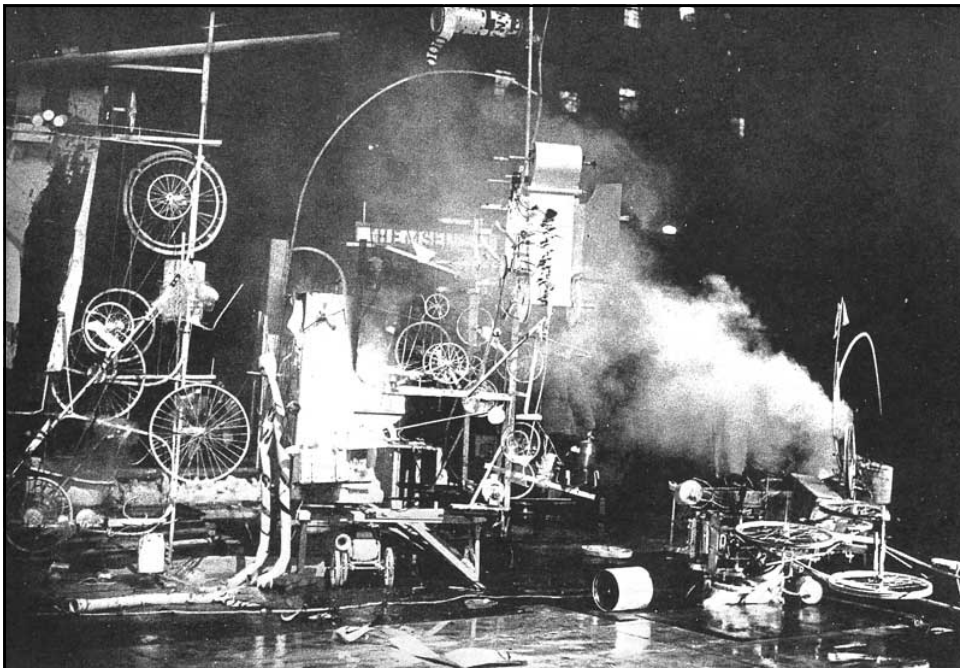
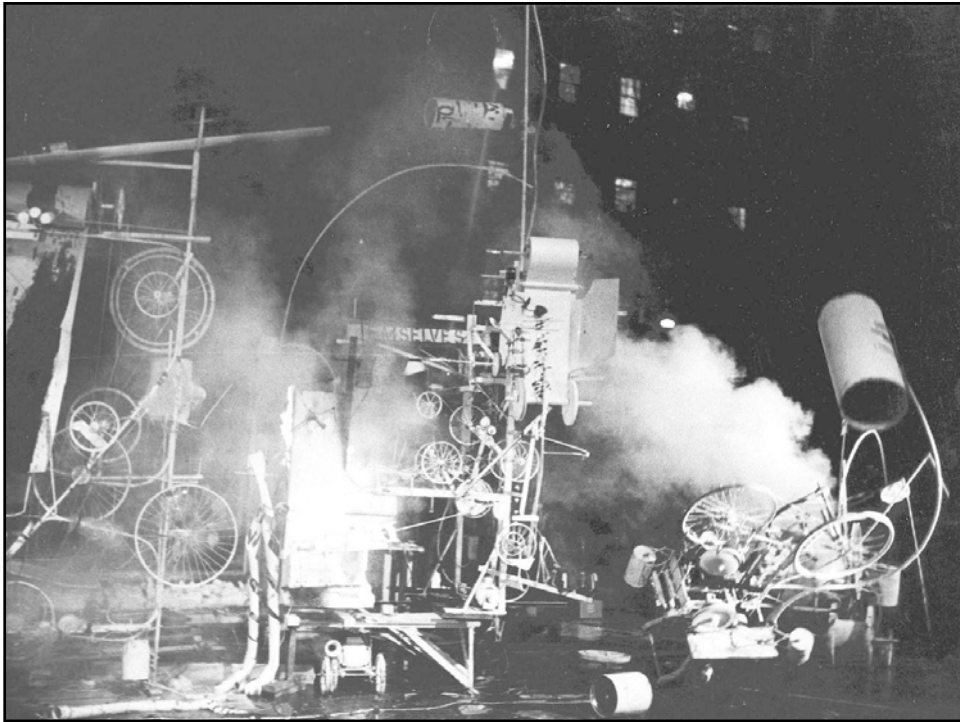




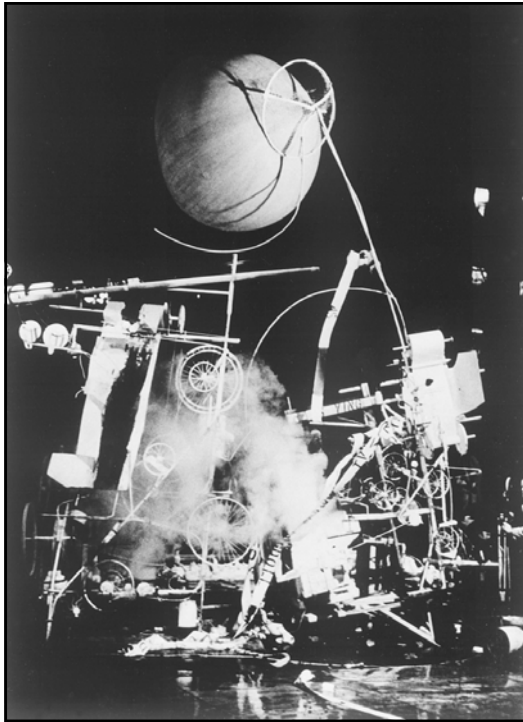
Jean Tinguely: Homage to New York, 1960. Foto: David Gahr.



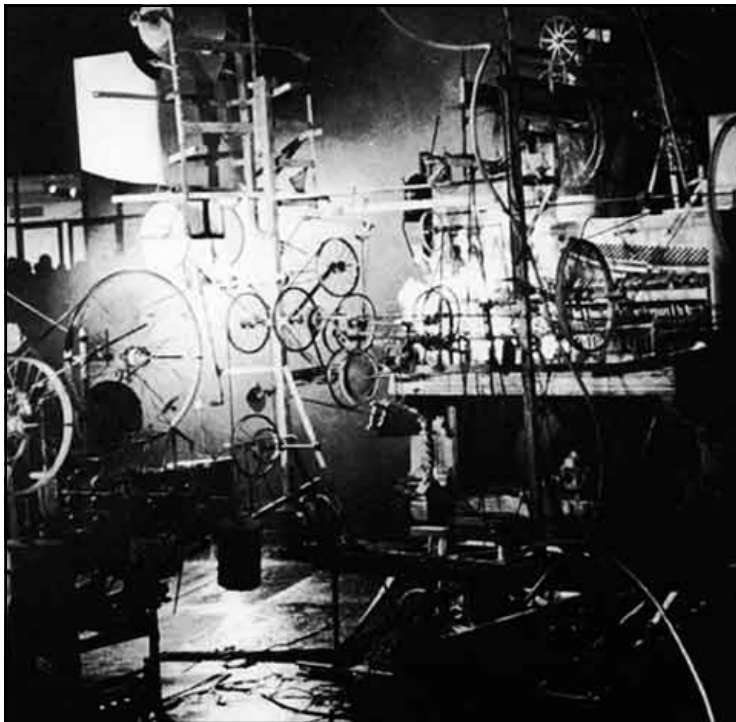
Jean Tinguely: Homage to New York, 1960.



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Jean Tinguely:
Homage to New York,
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The piano was to begin playing slowly as the flame on the keyboard was lighted. But the step-up transformer had broken in transport, so the motor had to be started directly at full speed. The result was that the driving sling jumped the wheel on the piano as the motor started. I went cold. No piano! Nervously, I tried to put on the sling. "Laisse-moi faire, Billy," I heard Jean's voice say calmly. A fuse had blown. It was fixed. The piano was working again, but only three notes were playing – three sad notes. Some slings had been lost. I saw nothing but the machine. The audience was invisible.

After three minutes, the first meta-matic went on. But Jean had reversed the sling so the paper was rolling up instead of down. It was a bizarre effect. Earlier he had with great care put the paper in order and fixed the arm. The audience must have expected a lot from this machine. To make the situation more incredible, the motor driving the arm had not been reconnected. Thus, even if Jean had put the sling on correctly, the meta-matic would not have worked, and the empty paper would have rolled down the trough. Jean was laughing as he always did when something exciting happened. Meta-matic No. 21 produced a three-foot-long painting as the beer cans emptied on to the paper rolling in the wrong direction. And the arm he had worked on to perfection did not function. But the fan at the bottom of the structure was not without use. The smoke was coming out thick and white from the bassinets, and the fan blew it toward the audience. Ladies with mink coats who were sitting in the cafeteria could not see because of the smoke. The percussion elements were working fine.

In the sixth minute, the radio went on. Nobody could hear it because of the noise. The gasoline bucket was turned over the flame, and the piano started burning. Rauschenberg's money-thrower went off in a big

Billy Klüver:
The Garden
Party, 1960.
Auszug.

flash. The silver dollars were never seen again. The fan motor started to beat on the drum from the washing machine. But the bottles did not fall. Jean had put in too weak a string. Why? After all our haggles over the stinks! But the only thing that annoyed Jean was that the balloon did not burst. The compressed air bottle was empty. The little two-wheeled cart in front of the meta-matic started to move back and forth.

In the tenth minute, the second meta-matic started and worked beautifully. It made a black painting streak with the sponge on its arm. The horizontal text went on. Something was wrong with it. It was winding up too slowly. Jean came by: "Do you remember the little ring you picked up and asked what it was for? It was to hold the paper roll up." Meanwhile, the vertical text was finished and the end of the paper was flying over the burning piano.

Jean was walking around calmly. He stopped in front of the machine and let the photographers take pictures, posing like an actor. As he was standing there, the text "Ying is Yang" appeared on the horizontal text roll. On the photographs of him with his self-destroying machine in the background, this sentence can be read above his head.



Jean Tinguely vor seiner Homage to New York, 1960. Foto David Gahr.

In the eighteenth minute, the fire extinguisher in the piano was supposed to go off. It didn't. The simple reason was that the piano was now burning all the way through, and the rubber hose had burnt up and clogged the extinguisher. But the suicide carriage rolled off some ten feet. The motor was so weak that Jean had to help it along. It would never have made it to the pool anyway, and Jean knew this all along. But he never exchanged the weak motor for a stronger one, which would have been a simple operation. As a functional object, the suicide carriage was supposed to move; as a work of art, it wasn't. This was typical of Jean's relation to the motor. On other places in the machine, there were big motors that did practically nothing; and in one place, he used a motor as a counterweight! The motor was for Jean part of the sculpture.

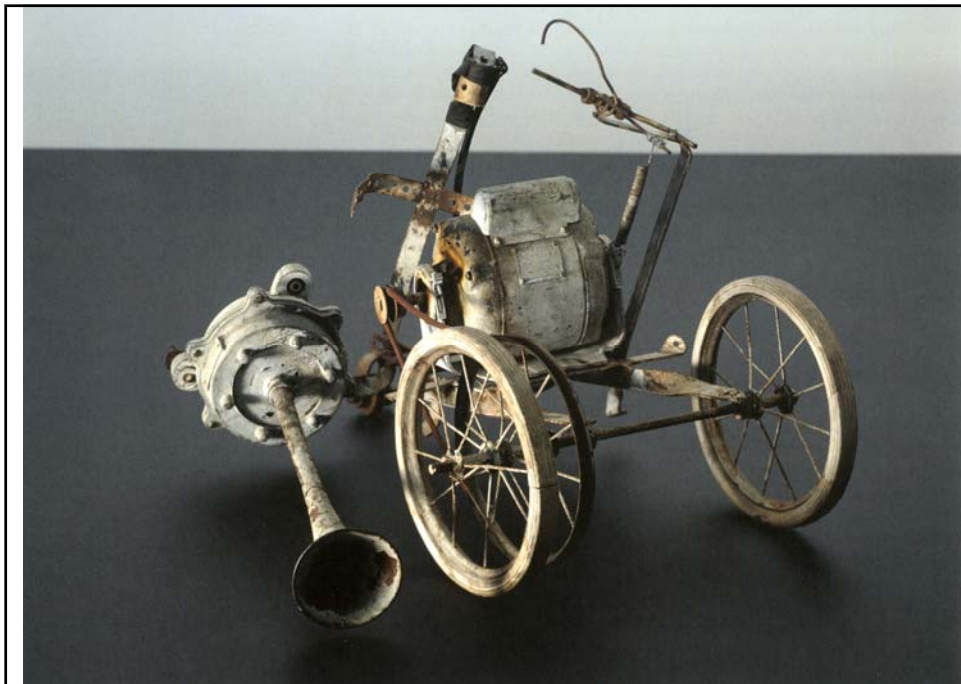
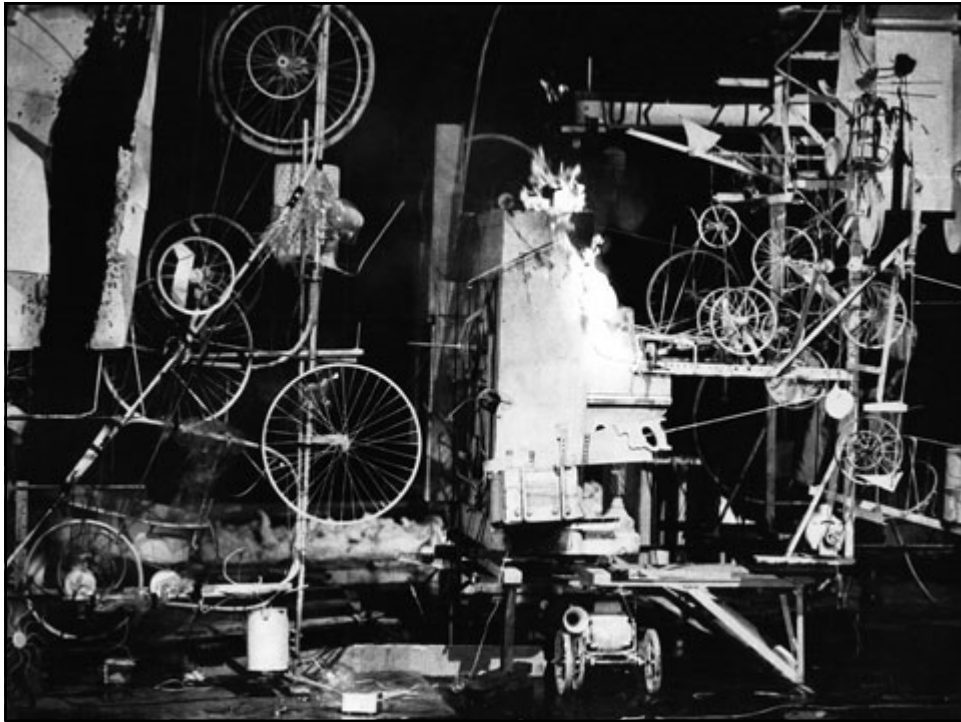
The Addressograph machine began to work. The yellow smoke signal was lighted, and the arms banged on the empty oil cans. The bell had never been put into operation. It turned out to be a gong that strikes only once. The whole machine was somewhat sick after the bad handling in transport, and it fell over after only a few minutes.

In the twentieth minute, the resistors in the first structure were connected. After a few minutes the metal had melted, and the whole structure sagged, but it never collapsed completely and fell over. The reason was that the crossbars that held up the wheels were strong enough to keep the structure together. But the smoke flashes were lighted by the heat from the resistors.

In the twenty-third minute, the little carriage shot out from under the piano with terrific speed. Its Klaxon was working fine, and it ended up in a ladder on which the Paris-Match correspondent was standing. He turned it around, and it continued into the NBC sound equipment. Smoke and flames were coming out of its end.

The fire in the piano was rapidly spreading. At one point, Jean had tried to damp it with an extinguisher. Now the flames had eaten their way through the piano, and Jean suddenly became afraid that the extinguisher on the back of the piano might explode from the heat. He told me to get the fireman to put out the fire.

The fireman had been there all afternoon. When the fire on the piano started, I was standing next to him. He did not react, and maybe he was enjoying the spectacle. He later called up the fire department. My wife overheard him trying to explain what was going on: "You see, Joe, there is this fire . . ." It was evidently decided that the fire in the piano was not a fire. Jean called him a "théoricien de feu."



Jean Tinguely: Relikt der zerstörten Skulptur "Homage to New York", 1960. Wagenteil mit Hupe, 48 x 70 x 65 cm.

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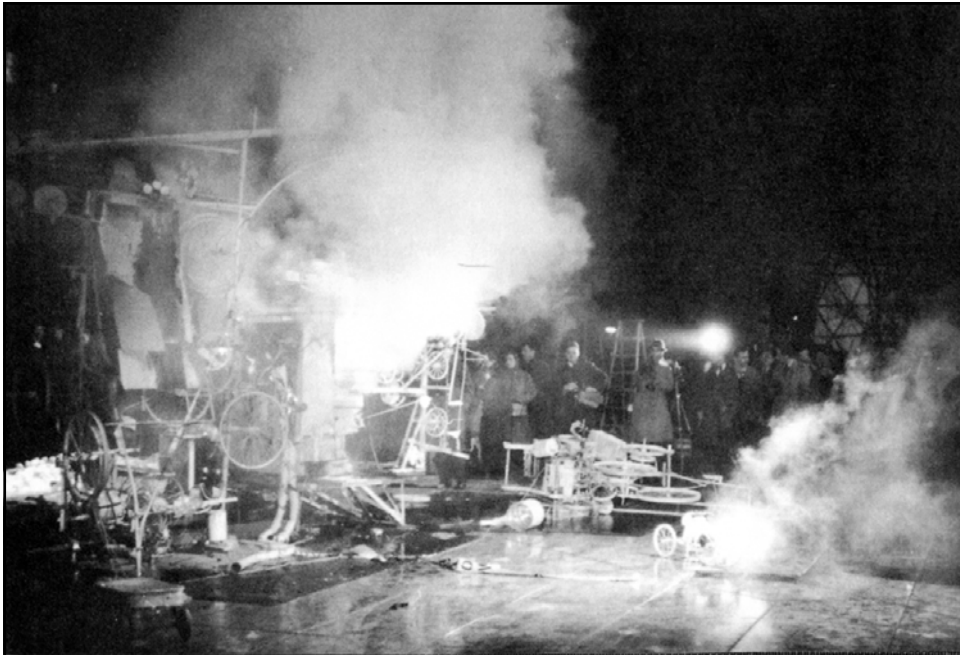
When I realized what Jean was saying, I tried to explain the situation to the fireman. He did not understand me when I talked about an extinguisher in the piano. The first fire extinguisher from the museum arrived. The fireman was very calm, as if nothing were happening. After three minutes, the longest in my life, they finally began to put out the fire. Even then the fireman was reluctant to do so because of the electrical wiring. At this point, both Jean and I were almost desperate, but the audience apparently got the wrong impression of what was happening. They thought the fireman was the one who wanted to put out the fire, and that we were trying to prevent him. They almost lynched the poor man who brought the extinguisher. A giant misunderstanding had developed, in which only the fireman seemed to be untouched by the confusion. He told me later that, of course, fire extinguishers are not made so that they blow up from heat. There had been no danger whatsoever. The fireman liked the show, he said.



Jean Tinguely: Homage to New York, 1960. Feuer wird gelöscht.

The fire was damped and Bob Breer courageously knocked the supporting pieces of wood from under the piano. Jean had not dared to use the automatic system because of the bad effects from the transport. The piano collapsed backward but did not fall over.

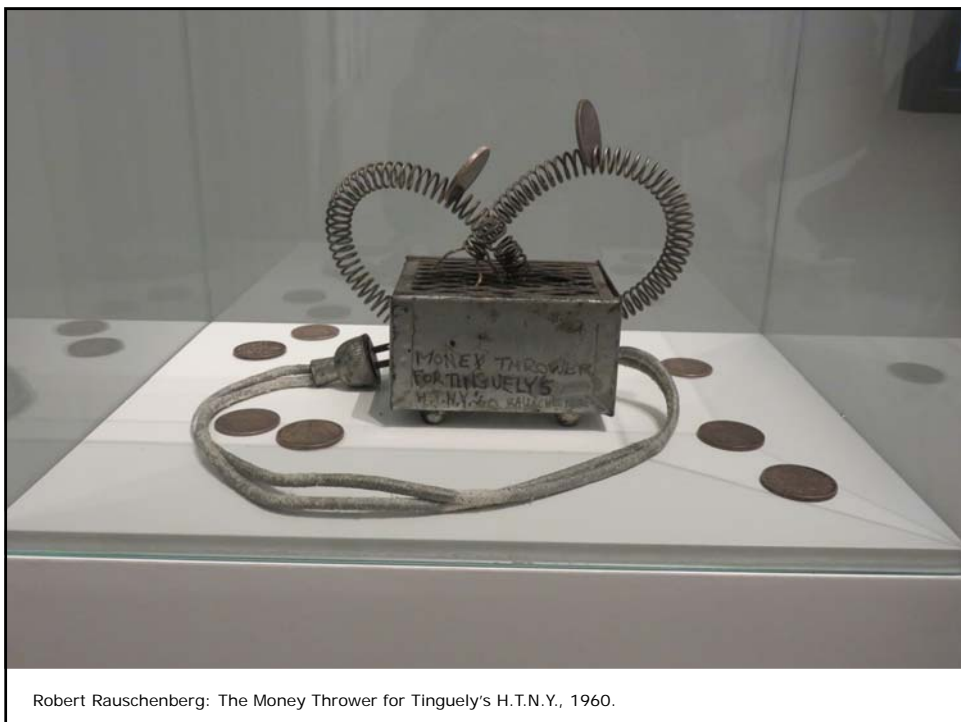
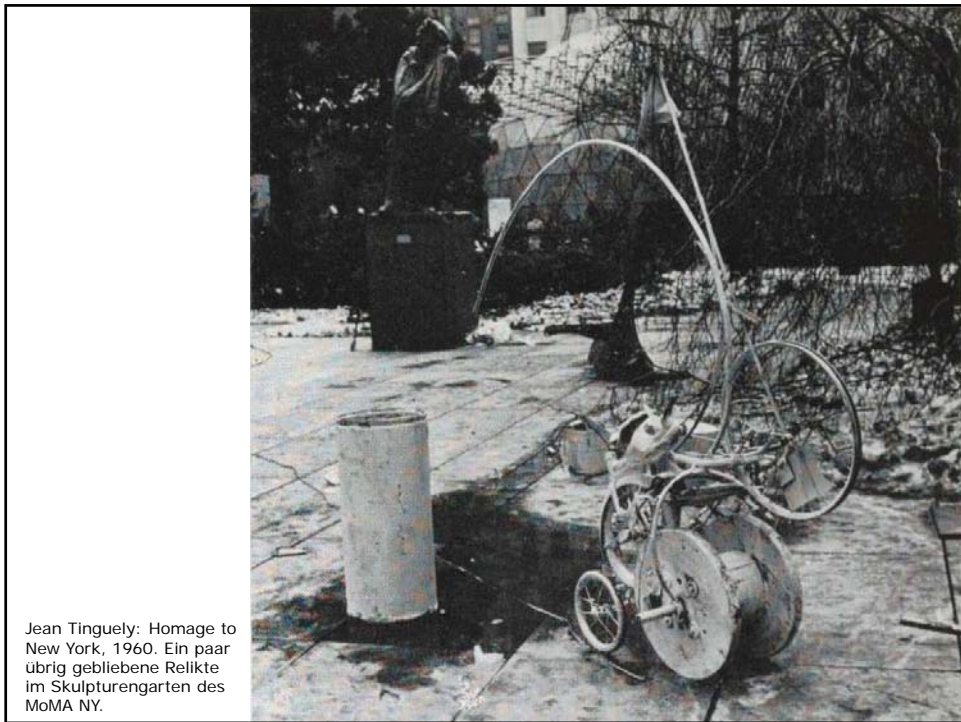
I separated the fire extinguisher from the piano, and the public descended on the remains for souvenirs. They walked away with the radio, the saw, the meta-matic drawings, and lots of other things. Later the structure was dragged down into a pile of scrap that looked incredible. The bottles broke, so that the garden stank for two days. The junk was carried back to the dump the next day. Only a few mementos survived. The battered Addressograph machine was given to a photographer from the museum, who hauled it away at great expense. It will stand and rust in his garden. The suicide carriage was given to the museum, Bob Breer got a funny wheel construction that had early been put out of operation by the eager audience, and the small carriage with the big motor and the Klaxon stands under my table. All the rest was memory and pictures.



Jean Tinguely: Homage to New York, 1960.



Jean Tinguely: Homage to New York, 1960. Nach dem Ende.



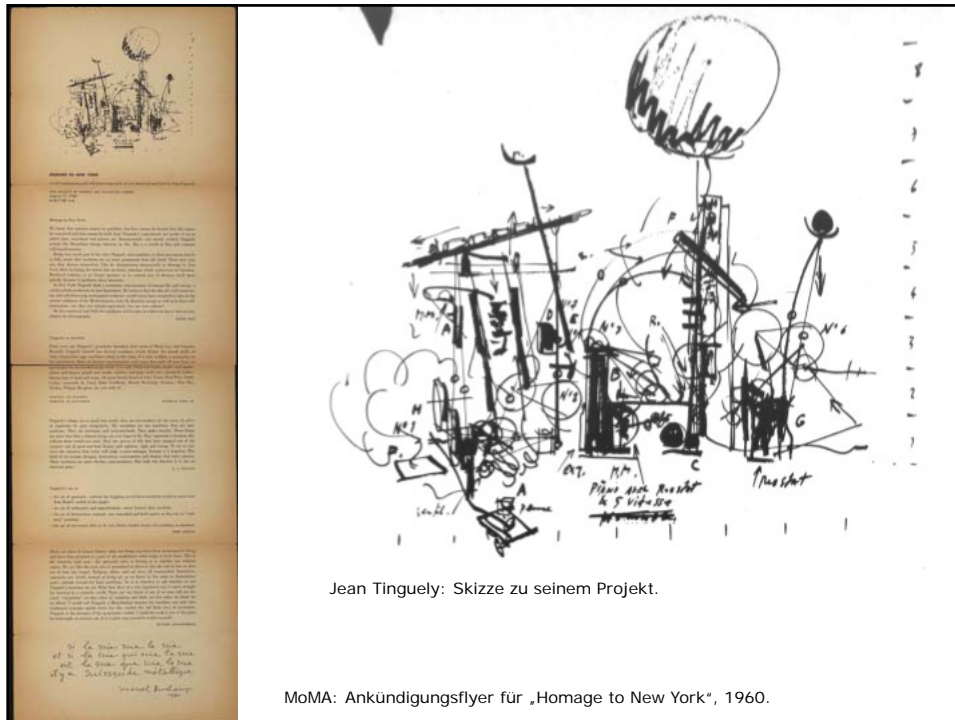


Robert Rauschenberg: Money Thrower for Tinguely's H.T.N.Y. (Homage to New York), 1960. Installationsansicht. Foto: Rainer Iglar.



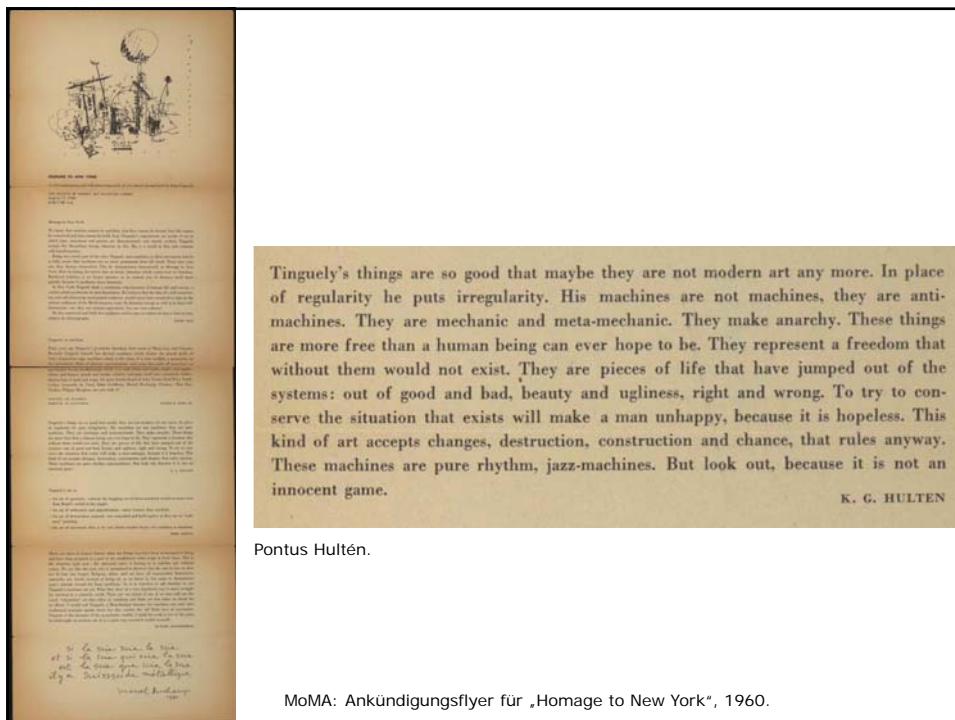
Museum Tinguely (Hg.): Robert Rauschenberg – Jean Tinguely. Collaborations, Ausst.Kat. 13.10.2009-1.1.2010, Museum Tinguely, Basel, Kerber Verlag: Berlin 2009.

KERBER ART



Jean Tinguely: Skizze zu seinem Projekt.

MoMA: Ankündigungsflyer für „Homage to New York“, 1960.

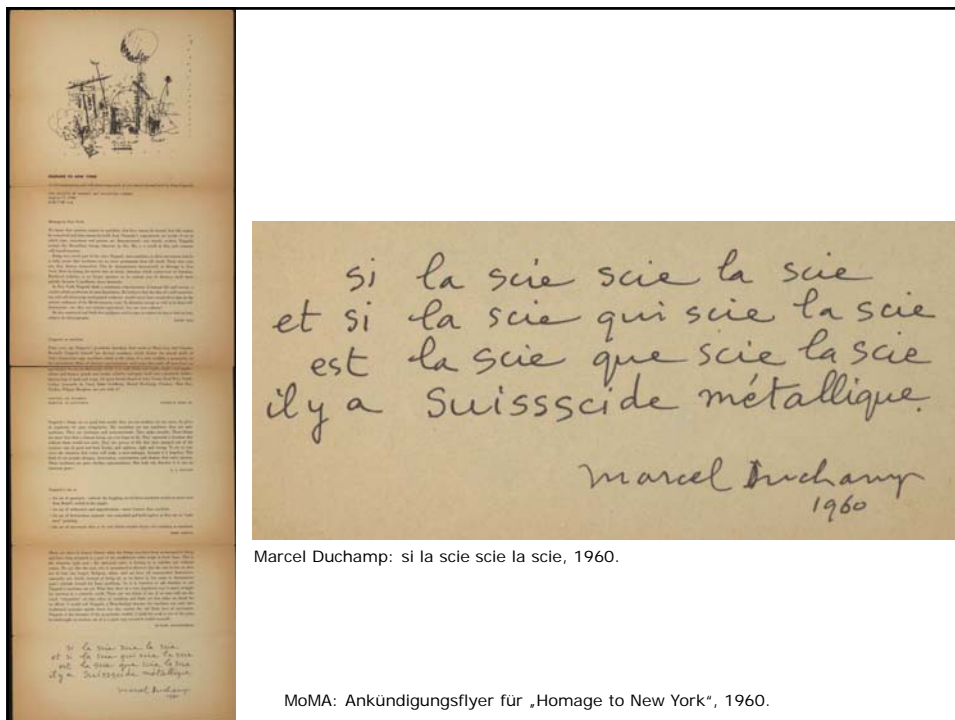


Tinguely's things are so good that maybe they are not modern art any more. In place of regularity he puts irregularity. His machines are not machines, they are anti-machines. They are mechanic and meta-mechanic. They make anarchy. These things are more free than a human being can ever hope to be. They represent a freedom that without them would not exist. They are pieces of life that have jumped out of the systems: out of good and bad, beauty and ugliness, right and wrong. To try to conserve the situation that exists will make a man unhappy, because it is hopeless. This kind of art accepts changes, destruction, construction and chance, that rules anyway. These machines are pure rhythm, jazz-machines. But look out, because it is not an innocent game.

K. G. HULTEN

Pontus Hultén.

MoMA: Ankündigungsflyer für „Homage to New York“, 1960.

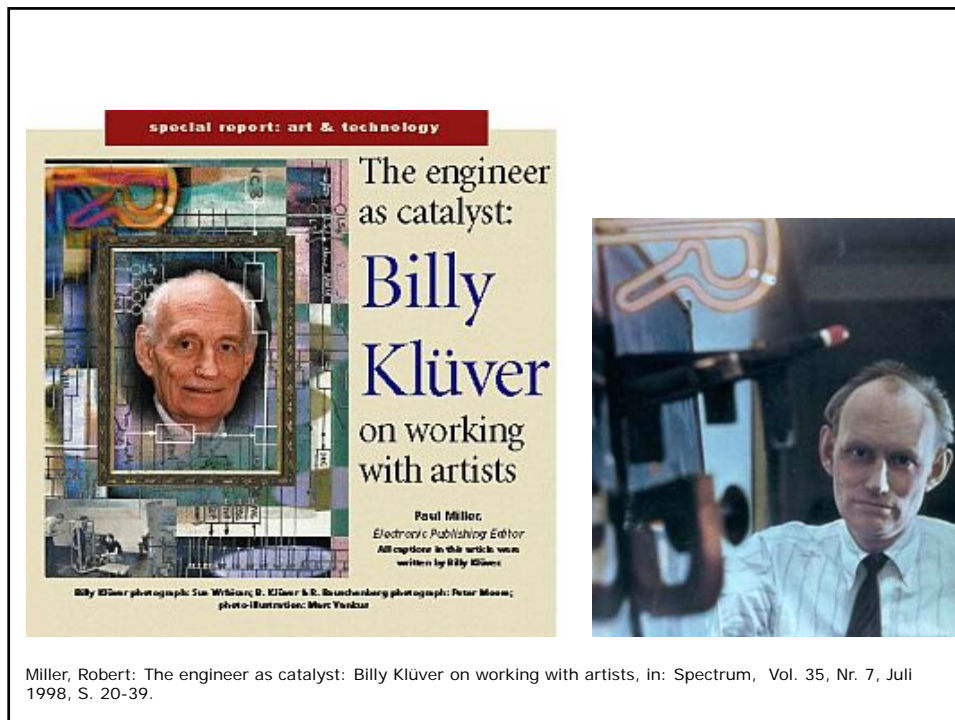


Marcel Duchamp: si la scie scie la scie, 1960.

MoMA: Ankündigungsflyer für „Homage to New York“, 1960.



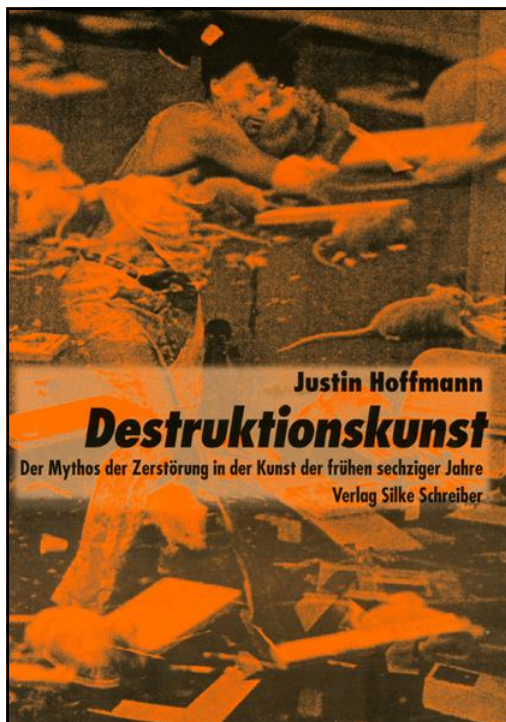
Zeitungsartikel von John Canady über Tinguelys Aktion „Homage to New York“, in: New York Times, 18.3.1960.



1959 Rede Lecture: “The Two Cultures”

I believe the intellectual life of the whole of western society is increasingly being split into two polar groups. ...Literary intellectuals at one pole—at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension—sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding.

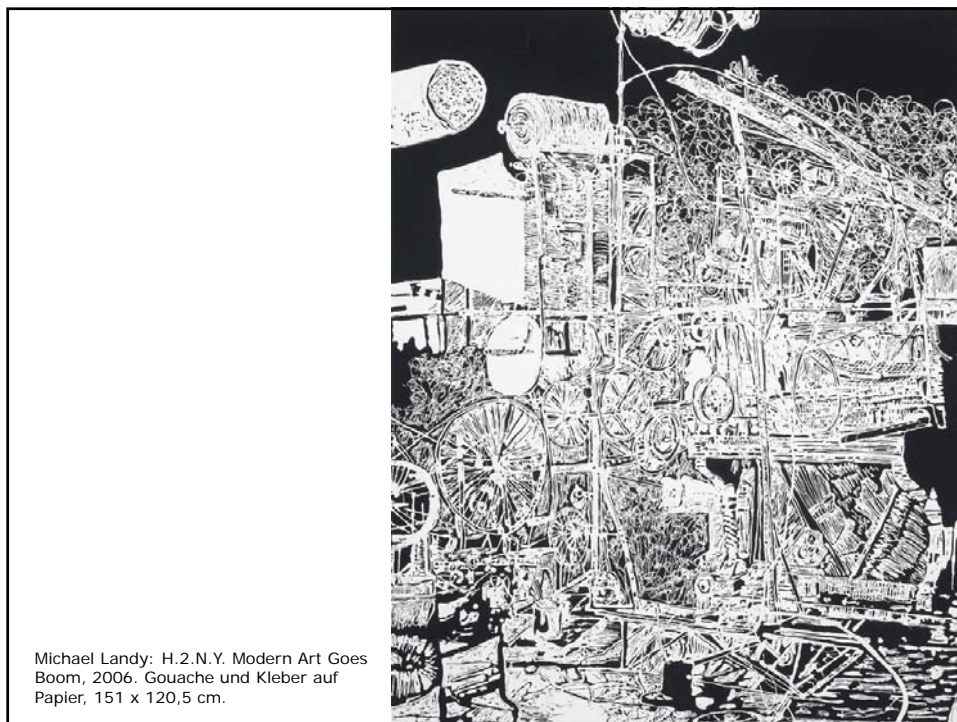
C.P. Snow



Hoffmann, Justin: Destruktionskunst. Der Mythos der Zerstörung in der Kunst der frühen sechziger Jahre, Silke Schreiber Verlag: München 1995.



Jean Tinguely: Homage to New York, 1960. Nach dem Ende.



Michael Landy: H.2.N.Y. Modern Art Goes Boom, 2006. Gouache und Kleber auf Papier, 151 x 120,5 cm.



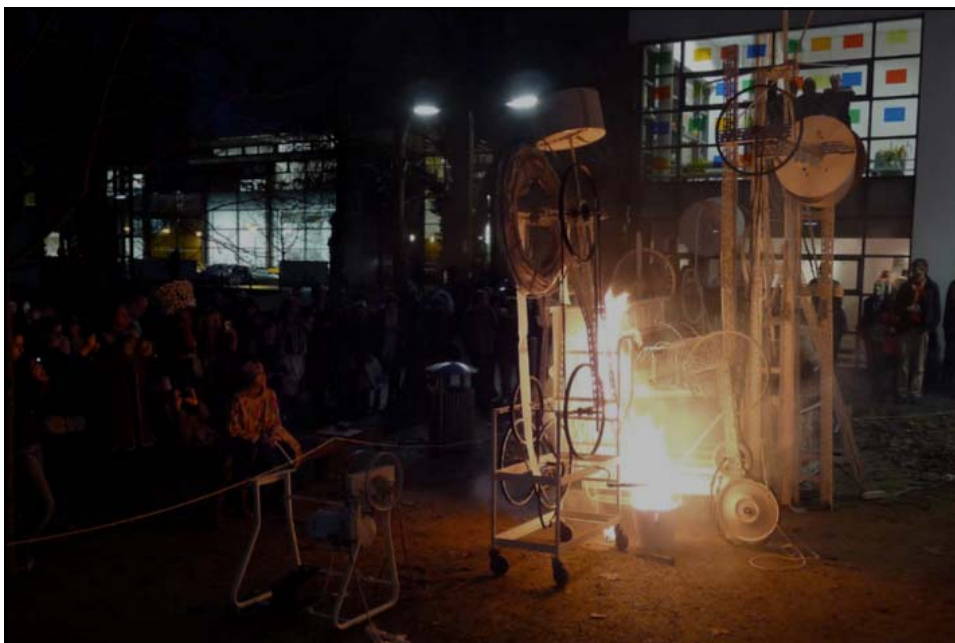
Landy, Michael: H.2.N.Y., 2008.



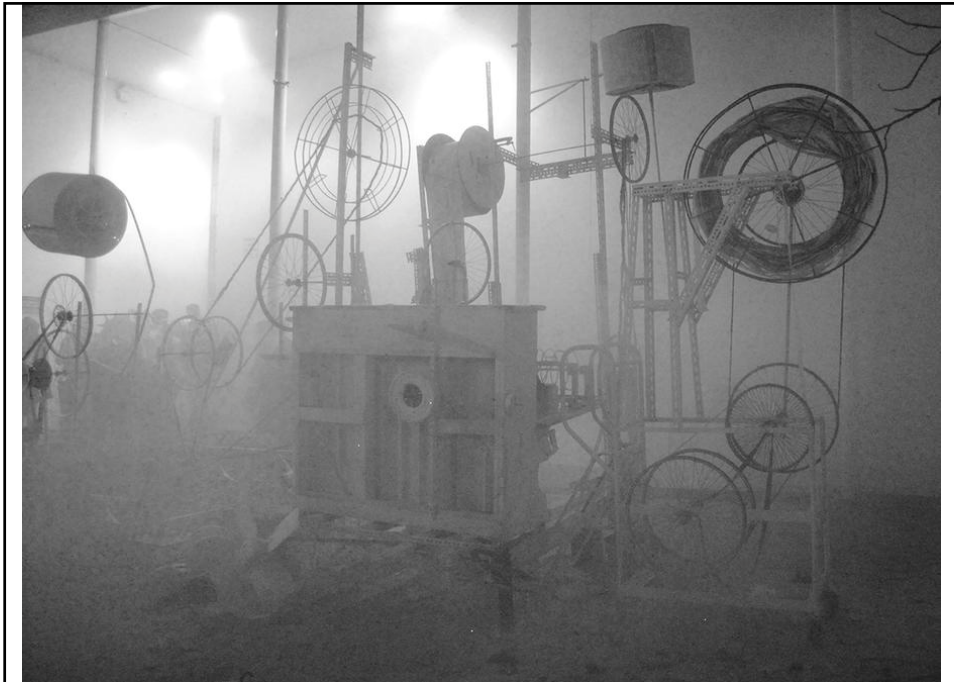
Remake of Jean Tinguely's Homage to New York by Ian Dawson and Winchester School of Art Students, 15.12.2011. <http://www.iandawsonstudio.com/homage-to-homage-to-new-york.html>



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Allgemeine Hinweise:

- **Online Plattform:** Die Folien der Vorlesung werden online bereitgestellt
UserID: **Kunst**
Passwort: **Technologie (bitte jetzt notieren!)**

- **Sprechstunde:** meine Sprechzeiten sind jeweils mittwochs 15-17 Uhr
_ melden Sie sich bitte über Frau Lechner an
_ Bitte geben Sie Ihr Anliegen an

- **Leistungsnachweis:**
_ Anwesenheit, maximal zwei Fehlzeiten (für alle Studierende)
_ schriftliche Prüfung am Ende des Semesters (für Studierende der neuen StO)
_ wenn auswärtige Studierende für ihre Studienordnung andere Nachweise zur VL erbringen müssen, bitte melden und individuell verhandeln

Literatur (Auswahl):

Blunck, Lars: Between Object & Event. Partizipationskunst zwischen Mythos und Teilhabe, VDG: Weimar 2003.

Jean Tinguely, Ausst.kat Kunsthalle Hypo Kulturstiftung, München 1985-1986.

Hoffmann, Justin: Destruktionskunst. Der Mythos der Zerstörung in der Kunst der frühen sechziger Jahre, Silke Schreiber Verlag: München 1995.

Klüver, Billy: The Garden Party [1961], in: Hultén, K.G. Pontus (Hg.): The Machine as Seen at the End of the Mechanical Age, Ausst.Kat., Museum of Modern Art, New York 1968, S. 169-171.

Miller, Robert: The engineer as catalyst: Billy Klüver on working with artists, in: Spectrum, Vol. 35, Nr. 7, Juli 1998, S. 20-39.

Museum Tinguely Basel (Hg.): Robert Rauschenberg – Jean Tinguely: Collaborations, Ausst.Kat., Kerber Verlag: Bielefeld 2009.

Shanken, Edward: Historizing Art and Technology: Forging a method and firing a canon, in: Oliver Grau, ed., Media Art Histories, MIT Press: Cambridge MA 2007, S. 43-70.