

PART 1

JACQUELINE BARNITZ

Okay. Jesus Rafael Soto, who was born in Ciudad Bolívar, Venezuela, went to Paris in 1950, where he felt he could discover an environment in which he could work much better than he could in his own hometown. And certainly in his own country. Since his arrival in Paris in 1950, his work has been generally very well-accepted there, but that was not always the case on these shores. Outside of a period in the 1960s, 1966 especially, when [op?] and kinetic art were very popular on these shores and Soto had his exhibition at the Kootz Gallery. Since then, there has been a kind of dismissal of this kind of art as possibly not quite as profound as some people [00:01:00] would like to feel.

And as a result, whenever there has been an exhibition, the reviews have not always been terribly kind to Soto. The recent one by John Russell in the *New York Times*, Saturday, November the 9th of this year, was actually not adverse at all, but nor was it particularly flattering. In 1969, when Soto had an exhibition at the Museum of Modern Art in Paris, Hilton Kramer reviewed it. And the July issue -- July 13, 1969 of the *New York Times* -- and actually mentioned him as, or rather mentioned his art, as being ignorant about the relationships to ideas it merely exploited. This happens to be the exact reverse of what Soto has actually been doing.

And Guy Brett, who wrote the book on kinetic art and who [00:02:00] published an interview with Soto, actually found that Soto was extremely conscious of the historical process in which he was placed. And he wanted very much to develop his art from stages in which he had found the work of others, for instance, Malevich and Mondrian. He was very aware of the artist's role to forcing new visions entirely by discovering new values, new possibilities in what already exists. And on top of that, Soto was also and is a very lyrical artist. Even though he uses mechanical means to create his art, he also has a very poetic quality in it, which I think anybody viewing the art would agree with.

In France, in Paris, where he has been working mostly since 1950, except for several trips back to his country -- short ones, that is -- [00:03:00] he has received quite favorable reviews. The first time anybody was aware of what Soto was doing in a kinetic sense was in 1955, when he was part of the [Denise-Ronet?] group in Paris, and he was working alongside with such artists as Vasarely, [Tanglee?], (inaudible), Calder, and all these people joined in an exhibition at the Denise-Ronet in 1955. And in the magazine (inaudible), there was a review of this show, where it was discovered that something new was going on in art. There was motion now that was included, motion and various retinal effects that had not been noticed before.

Clearly, there were artists, such as Schoffer and Duchamp, who were working with motorized objects. Consequently, kineticism was not new. But it was the first [00:04:00] time that it had become something of a movement and that now it was being done and investigated on a collective scale. But something more was being added. There was a lyrical quality to this work. That is to say, it was now gaining a poetic and an aesthetic quality. It was not just something in motion.

Soto's development in his art is easy to trace, from his two-dimensional works of the early '50s to his more recent works, from the late '60s on to the present. When he was still in Venezuela, he had heard of Malevich's *White on White*, white square on a white background. And he became fascinated. In [00:05:00] Caracas, he had studied painting, but he had not found an environment in which he could develop the ideas that particularly interested him. Clearly, he had seen French impressionism in the many very good collections in Caracas, Venezuela, so he was aware of light, an atmosphere in painting. But he did not find the environment in which he could develop in this direction. So when a student of his in Maracaibo, where he was teaching for three years, described to him Malevich's *White on White*, something clicked and he immediately realized that this was the direction in which he wanted to work.

The next artist who had a tremendous impact on him was Mondrian. When he heard about Mondrian's *Broadway Boogie Woogie*, and may have seen it in a reproduction when he was already in Paris, he [00:06:00] felt that this was a wonderful source for movement and felt, in fact, that Mondrian had achieved quite a lot. He first became interested in Mondrian before that. When he first got to Paris, he must have seen some Mondrian paintings and found this a good basis on which to build his own work.

Before I get to his development, the whole movement of kinetic and optical art that took place in Paris was peculiarly not French. In the '50s, for instance, when Soto, a Venezuelan, was working, and a little later, his fellow countryman Cruz-Diez came to Paris also. Agam was an Israeli, Vasarely, Hungarian. Tanglee was Swiss. And in the '60s, when the (inaudible), formed by [Le Parc?], who was an Argentinian, was established. Most of those artists, [00:07:00] too, were not French. There were two Frenchmen. One was [Stein?], and the other was [Mohela?]. The one artist, Yvaral, who was born in France, actually, was Vasarely's son, and all the others were either Argentinian, Spanish, and of course, the earlier ones, such as Soto and Cruz-Diez, and I think Otero also worked there for a while, were Venezuelan. Consequently, it seems to be a movement that is not French, although it developed in France.

Another point that I think established the atmosphere for kinetic and optical art was a taste that seems to reign among Venezuelans and Argentinians for an orderly art that grew out of constructivism. This may, in part, be a desire for order in chaos. Of course, it's quite the [00:08:00] reverse of what one would expect a Latin American to like, because one expects them to be a little bit Baroque and perhaps more expressive in an emotional sense. And although the art that they were doing is certainly very expressive, in a quieter sense.

But another reason was that both Le Parc and Soto had an enormous dislike for abstract expressionism and (inaudible). These were forms of art that were, of course, with the centers in Paris and New York. And these were the great centers of diffusion of this art. Consequently, there was, in Latin America, a certain feeling against the so-called imperialism that these two forms expressed. And so it was perhaps less surprising that they would have gone in another direction because, while they were working in Paris -- because Paris was the place where they [00:09:00] could find the environment and the influences they sought -- they still felt very close to their own countries. And since then, of course, Venezuela has come to be equated with kinetic art, because so many of its artists have worked, actually, in this particular direction.

Another influence, I think, that relates very closely to what Soto was doing and emerged within the mid-'50s was the fact that in Venezuela, although he didn't feel that the atmosphere was such where he could work as well as he did in Paris, things were happening in Caracas. The well-known Venezuelan architect, Villanueva, was building University City in Caracas in 1952 to 1956. And it's core was based on a very favorite Latin American concept of [00:10:00] integrating the arts. He conceived the central plan of the university and its grounds as musical movements consisting of six units, or movements, each one comprising covered walks, murals, panels, mural panels, rather, exterior sculpture. And these units would incorporate specific buildings, such as the library and the auditorium where, incidentally, Calder designed some stables for the ceiling of the auditorium. And in fact, this particular commission, given by [Vian Hueva?] to Calder, made him famous at that time.

Vasarely also contributed an aluminum panel, a mural, in 1954, to University City so that the taste for this kind of [grouping?], integration, and also art that would carry at a distance, was already in [00:11:00] vogue. However, these artists did not develop their real kinetic solutions until 1955.

Well, to trace Soto's work from the early '50s paintings that he called progressions, repetitions, and serials, these really parallel his later works that are now vibrations, kinetic structures, cubes with ambiguous space, penetrables. All these things, the later works are completely related to the earlier ones. For instance, Malevich's *White Square on White* was a source for Soto's painting, *Metamorphosis* of 1953 and '54, which played with two forms but on a flat surface, the yellow square on a white ground. And the top square was painted [00:12:00] with dots. It wasn't a solid square, so that he was able to give the illusion of transparency. Well this, of course, paraphrases the three-dimensional works that he did after 1955 with plexiglass. For instance, *Kinetic Structure of Geometric Elements* of 1955, where he painted on the outer layer of plexiglass a certain design with lines. And this would, in turn, interact with the background, where he would also have lines and where, as the viewer moved back and forth in front of the work, this kind of retinal action would take place. One surface would act on the other.

There is a close relationship also between Calder's mobiles -- for instance, *Three Antennae* of 1938 -- and much of Soto's work, which he did with [00:13:00] suspended wire. Soto's *Big White*, for instance, of 1966 has a cluster of thin wires suspended on one side. And the wire, as it moves around, interacts again with a background area with the very thin lines.

One important element is the dematerialized quality of Soto's work. He's interested in movement and not in a concrete object. And that's why he decided to use wires, because wires are so thin you can hardly see them. But they, in turn, create an action. And you can see the action that takes place between the two surfaces. Clearly, he got the idea from Calder, but Calder uses wire only to hold the mobile shapes. And Soto uses wire as a subject in itself.

However this, of course, gave [00:14:00] him some motion. It gave him the motion that he sought. But he also wanted to, he was striving towards a motion that was much more controlled, something that you might see, for instance, in a motorized work. He had seen Duchamp's *Optical Machine* and, in fact, in 1955 had seen it just when he started breaking through with his first kinetic works. And he was interested in creating something as controlled and programmed as the *Optical Machine*, but he did not want to use motors himself. And so as a result, Soto developed a kind of vibrating work where, by means of

surfaces that interact one over the other, or wire interacting over a surface with thin lines, so that the vibration is programmed and controlled. Although he's not using [00:15:00] motors.

For instance, his *Vibrating Squares* are perhaps the most successfully realized works in this direction. The squares are pegged on to a flat surface with a fairly short wire. It can be one square or several squares, depending on the direction of the motion that Soto has in mind. But nonetheless, as these squares, as you pass back and forth, the squares themselves appear to dematerialize. And what takes place is a vibration, in fact, between the background lines or patterns against the squares as you move back and forth in front of them. So he had, in fact, created a vibration that is motion, but controlled motion. And with an economy of means.

The first works that he did, or rather, in the mid-'50s, he did some in black and white. It was interesting [00:16:00] that both Vasarely and his fellow countryman, Cruz-Diez, also used black and white. It was as if the early kinetic effects or optical effects could best be resolved in black and white before color came back in. And then, of course, we know that Vasarely's color was what made him famous for his later works. And Cruz-Diez also, as a matter of fact, uses color very startlingly.

What Soto did, however, was not to become optical in the sense of using bright colors juxtaposed. The action of the color is very different. His action comes mainly from the juxtaposition of wires and thin lines with possibly one color at most. And the color that Soto uses is more of an atmosphere. You're bathed in that color, such as *Pink Wall*, for instance, or yellow would be used in the same way. So it creates a kind of poetic [00:17:00] [glow?]. And the action itself is created by other means.

I think one can find a relationship, again, between Soto's early work, *Optical Wall*, which shows a kind of irregular arrangement of horizontal bands that are broken by inverted forms. They're kind of inserted in a subtle way to have not actually been painted, but the bands are broken in such a way that you look and you see these forms.

Well, you can compare that to a 1965 work which he did, called *Red Sticks* where, instead of a flat painting, he actually created the same idea but with a background of lines. And then the red sticks, as they vibrate in front of this background, create the breaks in pattern in a similar way, but now resolved through three-dimensional forms.

I think that one of the most [00:18:00] important things in Soto's work is his use of musical structures. When Soto first went to Paris, he was a musician, a guitarist. And he earned his living playing the guitar. He also became very interested in reading about musical structures. He was certainly familiar and interested in Bach's progressions. And mainly, he became interested in Schoenberg's writings on the 12-note system and serial music. He did, in fact, in the early '50s, paint something called *Progressions*. And he did serial paintings, which were fully based on these codified systems. A progression, for instance, in the Bachian sense, involves a phrase of music which is repeated as a variation but with an increasing number of notes. And this principal is what Soto used, for instance, in his *Progressions* of 1952.

[00:19:00] Schoenberg, when he developed serial music, well, serial music is a form of codifying a phrase composed of 12 notes. The first phrase would be the 12 notes, and then the serial would involve repetitions of these 12 notes in different orders, but each time in a

pattern that was visually comprehensible, as well as creating a certain sound because the patterns were symmetrical in some way. So that there was a correspondence between the notes of that phrase. Well, these kind of proportional and structural elements in the music were what Soto borrowed for his own work. It's interesting that in Brazil in the mid-'50s, in fact about that time, they had evolved concrete poetry, which was also based on a kind of structuring of words in a non-syntactical way. So that the exchange [00:20:00] of forms of art from, say, music to painting or poetry to sculpture, since the sculptures in Brazil borrowed these concrete poetry systems in their own sculpture.

Well, to get back to music and the use of music, for instance, in Soto's work, where he did, in 1966... A good example is a work that he did called [*Muir?*], or *Wall*, for the Venice [Vienali?]. And in it, he had used yellow bars and had composed... These were vertical yellow bars that read from left to right in a steadily increasing number of bars so that, as your eye moved across, where the eye picked up the densest number of yellow bars, you saw the greatest luminosity. And this was based on [00:21:00] a kind of structuring of a progression, a proportional progression of numbers of yellow bars in order to give you this effect.

I questioned Soto the one chance I had, really to chat with him in Caracas last summer, about such works as *Grains of Rubber* of 1961, where suddenly he used textures that were rather different from his other works. And apparently, this kind of work stemmed back to when he started using the suspended wires. And this came about when he took a trip back to Caracas in 1957, after he'd been working with plastic and plexiglass in Paris. And when he got back to Venezuela, the plexiglass was not readily available, so he began experimenting with other forms and other materials. And this was when the wires were [00:22:00] actually born as and incorporated in his work. But also in Venezuela, there were other materials to work with, such as rubber. And so he did begin to do a series of others. But these, nonetheless, are in the minority in the body of his work. There are not too many of them. Most of his works do not deal with texture, precisely in order to derive this tremendously de-materialized atmospheric quality in his work.

The alphabetical works -- that is to say, with wire suspended in front of them -- certainly were born out of this work with wire where originally, he was just trying to create a motion in a certain direction. But then pretty soon, he began to see the possibilities of creating an impression of handwriting with the wires, with the motion that they created, that is. And, for instance, in *Spiral Writing* [00:23:00] of 1974, it does suggest this kind of motion, as if somebody were writing spiral characters. And, of course, the strength of this work is the fact that he can create so many different kinds of motion in so many different directions, just by balancing the wire in a certain way, bending it a certain way, and juxtaposing it to a certain arrangement of lines on the background.

In 1969, Soto became known also for his penetrables, of which there's a very large structure here in the museum. These can also be traced back to a little plastic box that he had made in 1955 called [*Juan Huevo's?*] *Little Box*. And it was with four plastic sides and squares sort of painted on two sides, lines. So it was basically the same [00:24:00] principle as his earlier three-dimensional plexiglass works. And little by little, he evolved from that.

And in 1969, for instance, he did a much larger work called *Cube With Ambiguous Space*. And it was an environmental size, but still dealt with plexiglass. And plexiglass, of course, closed it in so that it resisted penetration by the viewer. But since he was using the vertical lines on the plexiglass in order to create the juxtaposed form so that you could derive a sense

of motion as you moved in front of it, it soon became clear that if Soto used something transparent like nylon threads, that he could create a similar effect. But with the incorporation of the viewer, of the observers who had [00:25:00] first just gone to look at the works, now they could become part of it by entering, by penetrating.

He actually had done a yellow penetrable in 1967, which was a small-scaled work but did permit entry, at least through part of it. It was not completely covered or filled with these plastic threads, the nylon threads. You could enter into it and come to an empty space. But little by little, he developed the kind of penetrable that we see here in the museum. And one of his first large-scale penetrable works in 1969, as a matter of fact, was one done for the Museum of Modern Art in Paris. After that date, he began to do other not only penetrables but very large works where the spectator did not always penetrate. For instance, *Mobile* [00:26:00] *Saturation* of 1971, which dealt with a large-scale area of yellow. So this would be a saturation of the color yellow. He was interested in the impact of the color, but not as an object. Not as something that you could necessarily touch.

Well, after that penetrable, Soto enlarged upon his repertoire of penetrables. And he had conceived certain penetrables that he actually did not carry out, at least so far. When he was in Paris and after he had done the (inaudible) penetrable of '69, he had devised a project for a penetrable actually made of water, threads of water instead of nylon threads. And this would be a penetrable he had conceived for tropical or warm countries, such as Venezuela, where people could go in, according to him, with or without [00:27:00] clothes. He had also conceived a similar penetrable with steam jets coming up from the floor so that this would be for cold countries, where people could enter this penetrable in order to warm up.

I think that one of his most imposing penetrables was a sonorous one. A sonorous penetrable was not included in this exhibition because they felt that it would interfere with the viewing of other exhibitions and that it was a little bit disturbing. However, in Soto's museum in Ciudad Bolívar, which was inaugurated last year, there is a sonorous penetrable that is very, very noisy but a very imposing work. It is composed of tubes of two different sizes, aluminum tubes of two different sizes. And as the viewer or as the visitor [00:28:00] penetrates this work, it makes the sound of crashing bells. It sounds just as if you were right in the middle of a steeple and right next to a ringing church bell. The noise is really deafening, but at the same time quite beautiful, if you can stand it.

And it's interesting that he now has the extra element of sound brought in, which brings music back in another way. So that he is dealing specifically with non-material elements: sound, atmosphere, color, and movement. These are all things you cannot really pin down. For instance, here he also has another work called *Pink Wall*. And I haven't tried it, but I understand that one person can whisper at one end, and the sound is transmitted to the person standing on the other end without making any further sound.

[00:29:00] Well, the relationship of Soto to his country, even though he has worked mainly in Paris, I think is very important. Each country in South America seems to have developed a kind of art that has come to characterize it in some way. This is not only tied up with the kind of artists who are working there, but it's tied up with a whole economic system, social system, and the conditions that made the evolution of this art possible. In Venezuela, for instance, kinetic art and optical art absolutely thrive and have, in fact, become national symbols. This is because there is a lot of patronage and encouragement for these artists to work in precisely this way. One of the reasons is that Venezuela is one of the most

industrialized countries in Latin America, and this is a source of pride. It's an expression of their industrial [00:30:00] advancement, so to speak.

Consequently, there are private patrons who engage the services of these artists. And so they are kept busy. They work. Not only private patrons, but industry. For instance, there isn't a bank anywhere in Caracas that doesn't have a large work by Soto or Cruz-Diez or both. You can see their work in most business buildings, in the lobby, for instance. Practically every lobby you walk into has its Soto. Also, industry and biological research centers, the Sotos or Cruz-Diez could be indoors or in the exterior. For instance, the cross sections of great highways within the city also have Sotos. So that if you walk down any street in Caracas, you're quite liable to come upon a Soto.

Consequently, with this environment, the art has thrived [00:31:00] and has had a chance to continue developing. And so in spite of the fact that this kind of post-constructivist kinetic art may have died down in other countries where other styles have come in and taken their place, I think that probably the Venezuelan artists might carry it a step further and go beyond. Okay. Thank you.

PART 2

JACQUELINE BARNITZ

Well, I was particularly interested to find that in reviews in newspapers and in magazines, they generally were rather unfavorable in this country, and quite frequently favorable in Paris, where Soto lives most of the time. For instance, the last review that appeared in the *New York Times* on November 8, about this show and the one at [Denise-Ronet?], I think that was a reminder. I forgot my microphone. Sorry.

Okay. The John Russell review seemed, on the whole, to be fairly good, but it seemed to me a little bit ambiguous. He didn't say anything really bad, but it seemed [00:01:00] to be a bit tongue-in-cheek. For instance, he states that Soto was trying to achieve a maximum purity in abstract art, which had been consummated by Malevich. Of course, this implies that Soto wasn't going to add anything to it. Then, I started digging up other reviews. And the one by Hilton Kramer in 1969, which appeared in the *New York Times* July 13, was about the exhibition that Soto, well, it was a one-man show at the Musee d'Art Moderne in Paris. And that was really very adverse. He just found it terribly superficial. I won't go into the details about that review because I'm sure that most of you had seen it.

Here, there were several reviews in the mid-'60s, when optical and kinetic art was at its height. And [00:02:00] they didn't say an awful lot about Soto, which suggested to me that nobody fully understood what Soto was getting at, although they weren't bad. On the other hand, in Paris and in London, for instance, reviews were really very good. Guy Brett, who wrote a book on kinetic art, commented very highly on Soto. And Soto himself, for instance, he was quoted in the Guy Brett book as feeling "that an artist must foresee new visions and, in discovering new values." But he has to, of course, find the possibilities in what already exists. And this is, of course, what Soto did. His sources were Malevich, Mondrian, Gabo, Calder, and I'll get into that in a minute.

But I was particularly interested in this reaction, and one of the [00:03:00] conclusions I could draw, or I think I want to draw, is the fact that kinetic art seems to be primarily a movement that was born in Paris, first of all. In the second place, we had a rush on it in about 1966. At that time, the same year Soto had an exhibition at the Kootz Gallery. This came on the heels, of course, of pop art in the '60s, as we all remember. It was a time where fashion and art seems to have been rather prevalent because nothing lasted more than about a year.

The next point that I find rather interesting is that both Soto, who went to Paris in 1950 from Venezuela, and was followed by several other Venezuelans in Paris -- Otera, Cruz-Diez -- and in the '60s, an Argentine, Julio Le Parc, [00:04:00] rather, and several other Argentinians also went to Paris and were working in the same field. Of course [there were?] differences, but generally, these were all working with kinetic and optical elements. In both cases, the case of Soto and the other group, which was known as the [Group d'Research?] (inaudible), Research and Visual Art, were very much against (inaudible), which was a very informal painting that was taking place in Paris in the '50s. And abstract expressionism which, of course, existed here in the '50s. And in both cases, these movements represented to them something of cultural imperialism, what is known as cultural imperialism. And I think that the two cities best known for cultural imperialism would have been Paris and New York, since most of the ideas came out of [00:05:00] there. This was not the only reason. Clearly, Soto is not a political artist. But this was a certainly philosophical reason.

But another thing interested me very much, when I realized that most of the optical and kinetic artists working in Paris were, for the most part, not French. Vasarely is Hungarian, and Schoffer was Hungarian. Le Parc, Argentinian. Most of the group of the Group d'Research were... Very few French. I think there were two Frenchmen, and that's all. The others were either Argentinian, Spanish. And the optical and kinetic style seems to be very characteristic of the Venezuelans, most of whom developed it in Paris and not in Venezuela. It seems that Paris is a kind of kitchen [00:06:00] where foreign cooks go because they find the ingredients that they need for their stews. And this seems to be what the Venezuelans did.

Well, when Soto went to Paris he, for the first time, became interested in things that were more or less unavailable to him in his own country. He had been interested in impressionism and the effects of light, and he had become acquainted with it in Caracas. He was born in Ciudad Bolivar and had gone to Caracas to study. But when he got to Paris, he managed to see work by Mondrian and become familiar with it through other artists there. He also met, no, he didn't meet Mondrian. Mondrian died in '44. But he did get to see a lot of the work. And on top of that, he started...

[00:07:00] ... about serial music, which I will get to talk about further when we see the slides.

So I thought here that I would first show you slides not in chronological order but rather comparisons by which you can see the development between his early work and what he did later, how he developed it. First, we'll see a little of the environmental slides.

This is the Soto Museum in Ciudad Bolivar, which was inaugurated last year, 1973. And it was designed by the famous Venezuelan architect, Raul Villanueva, who is now very ill, I understand. And his son is continuing the work. The design itself looks a little bit like a Soto

[00:08:00] work, I think. And it was designed for that purpose. It houses not only Soto kinetic works but also by a number of other artists who are working in the same style.

Well now, I'd like to go into some of the sources that Soto took. For instance, next. I don't think they can hear me. Left also. The left slide, please. I know you can't see anything on the left, but it happens to be the *White Square on White Background* of 1918 by Malevich. This painting particularly interested Soto. He had learned about it when he was still in Venezuela. The painting on the right is called *Metamorphosis*. It was done in [00:09:00] 1953, between 1953 and '54. And it was, no, I'm sorry. The last slide, please, on the right. Former one. I didn't know how we got that one on the screen. But what Soto was interested in in Malevich was the sparsity of elements, which I'm sure you'll all agree. You can see a little bit more than this on the actual slide. That's fine.

What Soto wanted to do, wanted to take from this was the sparse element. But Soto went a step further. He wanted to create something transparent which looked as if it had two planes. But this was flat. This was a painting. He didn't start doing two-dimensional works until 1955. I mean, three-dimensional in volume. Next, please. [00:10:00] Yes, but there's another one. I'm sorry. There's another one on the left. Okay.

Soto evolved from this in 1955 to use three dimensions, that is, a background with a certain set of lines and designs, and then a plastic foreground so that as you looked at the work, it moved or it appeared to move as you walked past it. With the previous work that you saw on the right, he had achieved this two-dimensionally. But if you move, nothing happened. It was exactly the same thing. It remained exactly the same way. And the movement in 1955 in Paris was precisely to take these [00:11:00] elements off the canvas and put them in a three-dimensional state.

The interesting thing is that Soto did not learn from Vasarely. They developed their kinetic styles about the same time. Soto and [Tanglee?] and Agam were all coming up with kinetic solutions to the problems that they had posed themselves. Okay. However, Soto found that he wanted to develop a movement that was a little bit like a vibration. And he had very much admired the work of Calder, with whom he was familiar because Calder was very well-known in Venezuela. In the early '50s, when Villanueva was building the University City, he had [00:12:00] asked Calder, among other artists, to come and design some stables. And the auditorium in University City, called the [Alemagna?], actually has Calder's stables at the top. They, in fact, can be moved to regulate the acoustics.

And Soto was very much interested not in the stables but the mobiles. But he found Soto's mobiles a little bit too arbitrary in their movement. This was not completely the solution to what he sought in his work. However, the work that he has here, which is a 1966 work called *Big White* on the left, and that one is in the exhibition here, attempts to use some of the elements from Calder. For instance, those wires that he began using in about 1957, give some of the illusion. And they're perhaps a little bit more controlled than what Calder has, which, of course, [00:13:00] can rotate and move in different directions, depending on the wind. Left.

When in Paris, Soto also discovered that Duchamp had done something called the Optical Machine. The thing that you're going to see on the left, hopefully, could we have the slide on the left? There's one before this. Well, what I want to show you is a Duchamp rotary glass plate of 1920, which is motor-run. That's still not there. And what Soto wanted was to

create something that was as controlled, [00:14:00] a movement that was as controlled as the Duchamp work, but without the motor.

What he did here, of course, was something that's supposed to resemble the [Sofia?] Duchamp slide, which is apparently not coming. And it resembles this very much. For instance, he has one pattern of design in the back, and here the curve. So that you have very much the same movement. But I don't know what happened to that Duchamp slide. Here we go. It makes a big difference, because there are a lot of similarities between the patterns of this particular work by Duchamp and the one that Soto made. But the motor was something Soto did not want. So basically, what he wanted to do was to achieve a combination of Calder, the constructivist, Duchamp, but with a minimum of elements.

[00:15:00] After he did several plexi-glass works with actually two levels, he evolved the squares which, of course, you're very familiar with. This is called *Four Squares with Blue Band*, '69. And what he managed to achieve with the squares was precisely that controlled motion that Duchamp had achieved with a motor. These squares vibrate because they're pegged on to the surface. But they vibrate in an extremely controlled manner so that there is nothing arbitrary about it. Soto knew exactly what the effect was going to be when he created this work.

There's a strong relationship between what Soto was doing early in the '50s and what he's doing now. However, the works you're seeing now are not by Soto. The one [00:16:00] on the left is by Vasarely of 1956. No, I'm sorry. There's one before this. Sorry for that. And the one on the right is by Cruz-Diez, Soto's countryman. And it's called *Chain Construction* of 1957.

So around the mid-'50s, Vasarely, Cruz-Diez, and Soto were all working in black and white. The one before this. And they're trying to achieve movement, but still on a flat canvas. This is by, ah, here we've got the Vasarely. By Vasarely, it's called (inaudible) of 1956. And the design is very similar to a panel that he did in aluminium at University City in Caracas. So he was also working with lines that were attempting [00:17:00] to displace forms. So that this already looks as if it were three-dimensional, but it's not. It's flat. Next, please.

And here, we have, well, I think I'm going to skip it this time. There's a black and white one by Soto that we don't seem to have. How did that happen?

This is *Dynamic Composition*. No, could we please go back to a couple of them? Okay, next to that, *Red Sticks*, please. Okay. [*Mood Optico?*], the *Optical Wall*, is the squares... [00:18:00] How do we get that? No, that's not it. I'm sorry. Next to *Red Sticks*, I want *Mood Optico* of 1952. This is getting to be a joke.

Okay, that's better. Yeah. Well, this is the black and white one that Soto did. And it's related to the *Red Sticks* of 1965. As you can see, he evolved from trying to do it in a two-dimensional way to finding a three-dimensional solution so that instead of trying to break the movement this way, he actually had the horizontal lines in the back. And then when the sticks move, as you can see, they seem to break and ripple. So he now has totally abandoned the flat surface.

On Diez, Red, [00:19:00] I'm sorry. Next to *White Wall*, I want (inaudible). Okay. Well, *White Wall* was done in 1952 and 1953, between those two dates. And here, too, he was

already trying to achieve motion with the squares, the same kind of controlled motion that had been inspired by the Duchamp rotary glass. And he came to the solution of the square because first of all, the square was something he had admired in Malevich. It was one of the pure forms, the circle and the square being one of the sources for the constructivist artists. And so that when he used three-dimensional elements, he got this controlled motion, which was a kind of paraphrase to what he had done almost two-dimensionally. Because this is all attached to the canvas. [00:20:00] It cannot move. It just appears to move because of the light as you go past. And because of the way he has slightly shifted them. But now, he's actually working with a square away from the canvas.

No, I think now we'll take Mondrian and *Progression* of 1952. One thing I'd like to say is that the Latin American artists seem to have, at least the artists of Argentina and Venezuela, a great admiration and preference for constructivist principles in art, contrary to what anyone might think. And it seems to, no, not the one on the right, please. Next to the Mondrian [00:21:00] I want *Progression* of 1952.

It seems that in Argentina and in Venezuela especially, artists are interested in creating order out of chaos. Consequently, I think that is one reason why people like Le Parc and Soto developed their art as they did, [seeking Russian?] constructivist as the source, and of course, the [Bow House?], rather than more informal groups.

Well, Mondrian's *Broadway Boogie Woogie*, 1943, was particularly interesting to Soto because, first of all, it implied something with a musical system in it, the rhythmic patterns. And Soto himself was a musician. He was a guitarist. In fact, when he first went to Paris and he had no money, he earned his [00:22:00] living by playing the guitar in nightclubs. And he also played classical music. So, of course, from this, his interest in music developed.

And he did a lot of reading in the 12-note system of music and was also interested in Bach, the structure of Bach music. And what he discovered is, for instance, well, Bach worked in progressions. And progressions of music, there were no readings for Bach. He had to actually create the system himself. And what he did would be a theme, and then a progression would be the same theme with more notes, an increasing number of notes. And he actually built up a kind of structure, which was very important to later musicians. And then, in the twentieth century, Schoenberg was the one who actually wrote vastly about the 12-note system and pretty much [00:23:00] structured or codified something that was in the air.

It's interesting that Schoenberg himself was a painter and a friend of Kandinsky. And he had actually exhibited with (inaudible) group. So that now, at this stage, we begin to see a kind of moving over, shifting over from one art to the other, music, poetry, and the visual arts.

What interested Soto about the Schoenberg system, the 12-note system is that Schoenberg, for instance, would take all the notes of a chromatic scale for a theme, and then would do serial music. Serial music actually means that the same chromatic scale is reproduced with all the notes related to each other. This means, [00:24:00] of course, that the structure of the music as it is written was thought of first, and the melody second. The melody came out of this very mathematically-organized composition. And so consequently, music became what they call "codified," and this is a system that Soto tried to use in his art.

Here, for instance, when I mentioned poetry, it's interesting that this took place among the artists in the '50s. And it was also in the '50s that Brazil saw the rise of concrete poetry, where poetry was also becoming visual. It was becoming a visual experience as much as a poetic one. I imagine you know what concrete poetry is. It's non-syntactical poetry, where the visual appearance of the words on the page are as important as what the poetry is saying. And consequently, we have the same phenomenon [00:25:00] in music, where to look at a score of music, you can actually see the order of the notes. Where, for instance, two notes will appear in one direction going down the scale. And then suddenly, they'll appear in the opposite direction going up the scale. So there's a kind of relationship between the notes. And it's both visual and audial.

So Soto here actually made a painting that is called *Progression*. This was 1952, still flat. I'm doing this by theme rather than chronologically. And the progression is obvious, because he starts with a certain dimension at the bottom, a proportion, and then he increases it with the same musical system. I think we have one... I'm sorry, but there's [00:26:00] *Red and Orange* after that.

On the left is *Serial Painting*. This is a serial of 1952 and '53, also by Soto. His progression actually refers not only to the 12-note system, but he was also thinking of Bach, because Bach wrote progressions. And what he meant by progressions was precisely this increase of notes, where we'd have a theme and then the same theme would be repeated in variations with an increasing number of notes.

And here, with (inaudible), well, in this one he has, this is *Serial* on the left, by Soto. And *Serial* is also making use of the same musical background, where he's trying to create a kind of serial out of a few elements. For instance, he will repeat [00:27:00] them in another color and spaced differently.

On the right is *Red and Orange* of 1969. For instance, Soto talks about a [vibratory?] work that he had done in the Venice [Vianali?] that was something like this, which is in the show. And he has a progression or an accumulation of these rods in color, so that when the light shines on it -- for instance, the area where the most rods are accumulated -- seem to have the greatest saturation of light. His spacing is also determined by the musical structure.

In about 1957, Soto before that had been working mainly with plastics in Paris. And about 1957, he went back to Venezuela. And it was really [00:28:00] there that he developed his use of metal rods, which he then went back to Paris and continued developing. He told me -- I've seen him twice, and each time, it was during a social occasion. And each time, he had a glass in his hand was feeling no pain. And so I didn't feel I could really ask him too many serious questions. But he did say that when he went back to Venezuela in 1957, there was an absence of some of the materials he'd been used to working with, such as the plastics, or at least they were in short order. So he decided to start exploring other materials, such as wire. So it's really there that he began experimenting with hanging wires over surfaces that been striated, through, evolved these kinds of works.

This is called *Grains of Rubber*, 1961. It's actually a rather unusual work for Soto because he usually works with very smooth materials. And here, he's working [00:29:00] with something that's almost baroque. You know, it has a lot of texture, and it's something that he normally isn't known for. But he has a paradox working in this *Grains of Rubber*, because what he wants to do generally is totally dematerialize the work. He's trying to do away with

the concrete and material aspects of work and have something that you can experience in color or sound, as the case may be, visually. But not something that is a concrete object. And the point of this is that he's exploring movement as a subject instead of the object itself. And movement, of course, is the purpose of these wires, because the wires themselves almost disappear, but something is going on. Next, please.

Okay. The metallic vibration before, I don't know how it got there. But [00:30:00] the squares, for instance, which again, he went back to the squares. And it was a more ordered work. And that was, again, the idea of getting a completely controlled motion so that [it was?] absolutely not arbitrary, as in Calder.

Here, we have [*Three?*] *Alphabetical* of 1957, which is in Caracas. And next to it, *Spiral Writing*. There was something else which isn't there, but this is *Spiral Writing* of 1974. Well, first of all, *Three Alphabetical* suggests that the title was given to the alphabetical after it had been done because he only started doing alphabeticals after that date. Alphabeticals suggest writing. And what he eventually developed from this was the feeling of something going on, as if an invisible hand were writing in the air. This, of [00:31:00] course, is mural-sized, and the other was also one of the bases from which he developed this writing. For instance, the hanging wires became thinner and thinner and thinner, and began to look like alphabetical letters.

I think we'd better take the next one, because that's out of place, too. That's sideways. This is a constructivist work by Gabo, done in 1942, 1943. And Gabo had been working with the Russian constructivists considerably earlier. It's still sideways, but if you can pop your heads to the right, you'll get the idea. Gabo, in his constructivist work, was using thin elements to create [00:32:00] an object that was transparent. And this transparency is what inspired Soto eventually to create similar things. The next on the right, please.

In one object, which he calls the [*Tarjeta de Villanueva?*], or the little box, this is writing. That's not the box that I want. There should have been one before. *The Little Box of Villanueva*, which he made in 1955, next on the right. This is done with plastic, and it gives the illusion... It is, obviously, something is going on, but it's not concrete. It's transparent. But as you move, it has the kind of, your eye reacts to these forms. The square is something he uses very often. But the [00:33:00] idea for this, this is, the lines have been etched into the plastic on both sides. And as you move, of course, you have a shift of designs. But he got the idea very much from Gabo. Next, please.

From there, he developed, on the left, a cube called *A Cube With Ambiguous Space* of 1969, so that he was still working a little bit within this tradition of Gabo, and also with the same idea of the Villanueva box. That he was developing towards something where the spectator was going to be more and more involved. This was still a fairly small piece. It was not the [penetrable?], but nonetheless, you begin to feel as though you were inside this box. And, of course, as you shifted, you couldn't quite tell at what level or at what depth the cube existed. And there were squares on all four sides, so the whole thing changed quite a bit as you moved around it.

[00:34:00] In his museum in Ciudad Bolívar, he did something called saturation, mobile saturation. The next on the right two, please. And in 1971, this is still not a penetrable, but it is of vast dimensions, monumental dimensions. And the yellow penetrable of 1967 was one of his very, very early penetrables because basically, he wasn't known for doing penetrables

until the one he did in the Musee d'Art Moderne in Paris in 1969. What he had created here was something of a smaller museum dimension, but already which included the spectator. You could walk through this. And he used thin plastic rain-like elements that actually, the [00:35:00] rain was not an accident because when he was in Paris in 1969, he had planned to do a penetrable that was not with the plastic that you see out here. But actually which would have rain. He wanted to have [atop?] a kind of ceiling from which little tubes would drop jets of water at certain intervals so they would be spaced structurally, as they would be there. And he had designed it or conceived it to go in a tropical country, such as Venezuela, where it's warm. And the spectators could enjoy going in, either in a bathing suit or fully dressed, to enjoy not only the sensation of the rain but the visual appeal. Out here we don't get wet, of course. This is just translucent plastic.

He had also evolved or thought of an idea for a cold country, where instead of the rain, he would have steam coming up from [00:36:00] the bottom so that you could walk through and warm up. So he never did any of these things, but he did achieve several penetrables in several places. As a matter of fact, these are all the later ones. And the one out here can be dismantled, and they're really not reproduced. They are just temporary structures.

This is the penetrable he had designed for the Paris Museum, the Musee d'Art Moderne, in 1969. And it's of vast dimensions. It occupied, I think, about half the museum on the exterior, the length of half the museum. And it has achieved very much what Soto was after. He wanted to completely dematerialize but create action in space. You know, a lot of the criticism of Soto's work has been that it was too mechanical, it's cold, and [00:37:00] that you can't really relate to it. And this is precisely where I think that he has conquered this very problem, because you not only relate to it. You are included in the work. The work itself doesn't mean anything until the participant enters into it.

This is the same idea, one that he did in his museum in Ciudad Bolivar. And it's right inside the museum and occupies a good half of a very large room. And you can see the shadows of various people. The one you see in the middle happens to be a priest who likes to go to art exhibitions and see the [poetries?]. Well.

I'm sorry that the slides got so terribly mixed up, because what Soto has been building [00:38:00] up to from the beginning, all the ideas that you see in his work in this exhibition were existing in the early '50s. And through investigation and research and, of course, with the help of the sources that he used for his work, he developed these ideas fully, three-dimensionally, because he felt that when you looked at a Mondrian, for instance, even though you knew that movement and rhythm were there, it could not really exist unless you did it on the three-dimensional terms.

The penetrable is, of course, a culmination of all the ideas he had had because the vertical movement and the fact that now you could be a part of it. So I'm sorry, but that's all. Thank you. Oh, this is the same thing. The penetrable in [Pampatar?]. Actually, this [00:39:00] penetrable was built specially for one of his patrons, [Alfred de Burtan?]. And it was taken to his home in (inaudible). He has a summer home there. But they had to dismantle it and take it back to Caracas because the climate in (inaudible) is apparently very bad for artworks. It's very salty air. And so this didn't survive there. It was brought back.

There was one more thing I wanted to say (inaudible) Mondrian. Well, we'll talk about it upstairs or downstairs when we have coffee. Okay, thank you.

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Jesús Rafael Soto Lecture with Jacqueline Barnitz, 1973 or 1974

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