Mladen Bizumic Photo Boom Photo Bust In Loving Memory of Heidi Fazekas Charlie Christoph Grafeneder 15 Free Kodak

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Offshore Haven, 2002-2016 Chromogenic print on Kodak Endura Metallic, Matt, Gloss, and Transparency Paper, original Kodak Portra Professional 160 VC negative film 80 x 222 cm





Kodak (Light Leak Industry #1), 2004-2015 Chromogenic print on Kodak Endura Paper, original Kodak Portra Professional 160 VC negative film 100 x 70 x 4 cm



Kodak (Light Leak Industry #2), 2004-2015 Chromogenic print on Kodak Endura Paper, original Kodak Portra Professional 160 VC negative film 100 x 70 x 4 cm





























Michael Asher, no title, 1973 Installation view, Galleria Franco Toselli, Milan Photo: Giorgio Colombo



Hans Haacke, MoMA Poll, 1970 Installation view, The Museum of Modern Art, New York Photo: © Hans Haacke/VG Bild-Kunst

Free Kodak, or #FreeKodak as it is announced on social media, is a present-day call to the musician Kodak Black. Florida-born Dieuson Octave, or Kodak Black (his stage name). has warranted the status of freedom since an early age and, as a law offender from his early years, is no stranger to a youth detention center. Kodak has also wanted to free himself in a number of other ways. Following a long history of rappers who made hip hop a form of freedom of expression. Kodak Black articulates the suppression and aggression of living in a disadvantaged area of the US in a way that has allowed relevance that extends far beyond the confines of their neighborhoods, reaching a global audience. His rise to fame has facilitated much prosperity, namely personal wealth that has connected his dreams with reality. Yet, while this more advantaged position suggests liberty-a liberation from the elements that constitute and define many of the US's poverty stricken areas-it seems that Black has not been able to attain or even pursue it. His pattern is circular, progressing only to fall back to his initial trappings: jail.

What does a rapper from Florida have to do with New Zealand-raised. Austrianbased artist Mladen Bizumic anyway? Among results yielded by #FreeKodak are those of the company Kodak, which has been one of Bizumic's main points of investigation in his work. Similarly, a Google search for Kodak reveals as much about the rapper as it does about the once famed business for producing film: the rise of social media and its consequences being another of Bizumic's interests. Kodak Black and Kodak share a similar tale insofar as pilfering from their own downfall, or rather encouraging it. They also share a desire for liberating their own image. On opposite ends, Kodak Black has gained popularity through social media, (particularly Instagram) while Kodak's demise

was primarily because of it. Similarities extend beyond this, aside from Bizumic's adoration for hip-hop. Bizumic's own artistic approach gleans seemingly unconnected materials to draw out other issues beyond their apparent subject matter, connecting social and political issues with the language of art-making and its history, much like this seemingly disjointed introduction.

Since early 2013, Bizumic's work has been dedicated to an examination of the Kodak Company. This in-depth focus and attention given to one subject (as it seemingly appears) could have its roots in the research-based practices of artists synonymous with the birth and golden age of conceptual art, and in particular Institutional Critique. Uniqueness is perhaps found in the manner in which they focused on the process of making and producing art, pointing to and using everyday systems, including both social and political issues. The work of Michael Asher, who often looked and reflected "within," could provide an inlet to the understanding of Bizumic's rigorist attitude. Asher's work honed in entirely on the site, place, and exhibition space of the actual material for his work, making interventions by way of making subtractions or additions to the museum or gallery space environment-sandblasting walls at Galleria Franco Toselli, in Milan in 1973 or removing a partition wall the following year at Claire Copley Gallery, Inc. in Los Angeles. Both focused on and made apparent the mechanisms of art and exhibition presentation. as well as its workings: at Toselli the idea of the white cube and the apparent autonomy of the white support surface, and the business of art unveiled at Claire Copley, exposed via the deduction of the office wall as it brought the office into the exhibition for public scrutiny. Another artist offering likeminded artistic measures in regard to the study of art making

and more precisely its exhibition and associated aspects-usually those not tangible vet intrinsic to its presentantion-is Hans Haacke. His work MoMA Poll (1970) exposed his cynicism for Nelson Rockefeller, who at the time was not only the Governor of New York but also a trustee for where the work was produced and presented. The Museum of Modern Art. For the piece, the audience was asked "Would the fact that Governor Rockefeller has not denounced President Nixon's Indochina policy be a reason for you not to vote for him in November?" Each visitor was given a voting paper that they could place in one of two Plexiglas boxes: one for "yes" and the other for "no." Both Asher and Haacke are some of Institutional Critique's most famous proponents who researched the inner workings of artistic production and exposed much deeper content to reveal and reflect on society and our way of living, with insight driven by a vision that is more thorough, yet its output appearing simple and minimal.

These two artists, and many others around that time with similar critical and context based practices, have indeed inspired Bizumic's work. While his pre-2013 pieces touched on the subject of photography, his investigation with Kodak honed the study of the medium into greater detail, making photography become one of his practice's primary facets. If Bizumic's work sits in the lineage of Institutional Critique it could equally share a likeness with the lens-based practices of his counterparts, particularly those who examine photography as a medium and social phenomena, and photography's inability to be entirely objective. For example: the lens-based practices of Wolfgang Tillmans, with his portraits of contemporary living and attention paid to the sculptural possibilities of photography paper, the mixing between form and content of Annette Kelm, and the

self-reflexive investigations of Christopher Williams that are as much a question of photography as they are the subjects his images document.

While Bizumic's works prior to 2013 might seem at odds with those he produces today, they are connected despite the apparent topics they are seemingly associated with. They are aligned by a conceptual impulse that runs throughout: displacement and the examination of what happens when the thing displaced is out of its natural confines. The newly formed context that the artwork finds itself in, as well as its contextual elements—including institution, duration, and presentation—are taken into account and become very much part of it.

Bizumic has had a long relationship with Kodak, in later years realizing its potential to have rich and layered connections that fan out far beyond the picture. He always shot on Kodak 160 VC and 400 VC until it became unavailable. And the question of why it became extinct is precisely what his work began to study. Take United States Patent (1977-2014) for example, which consists of a copy of the patent for the world's first digital camera. invented by then-Kodak engineer Steve Sasson in 1977. Wanting to glean a further understanding of the invention and its underpinnings, Bizumic traveled to NY to visit Sasson. The engineer told him of the pitch he made to Kodak executives about the invention, eager to have it put into production. While they found it interesting as an invention, many grappled with its ability to shun film altogether-the overall mood perhaps best compounded by one of the executives leaving a meeting and commenting that he hoped Sasson's invention would not succeed. A case of shortsightedness, or ignorance perhaps, it became Kodak's



United States Patent, 1978-2014 Chromogenic print on Fuji Archival Paper 42 x 32 x 3.5 cm



Where Instagram Lives, 2016 Shredded chromogenic prints 4 parts, each 102 x 72 x 3.5 cm

Where Kodak Lives, 2016 35 mm slides 20 parts, each 20 x 30 cm missed and fatal opportunity: Sasson, a Kodak employee, had invented Kodak's own death. From its founding in 1880 by George Eastman to its subsequent global rise and dominance that saw the securing of a ninety-percent photographic film market share in 1976, Kodak's subsequent downfall was due to the rise of digital technology, putting film out of the picture.

One of Kodak's replacements, Instagram, is captured by one of Bizumic's recent pieces. Where Instagram Lives. A series of four parts, each containing hundreds of shredded photographs that contain the same image of the Luleå Data Centre, Sweden, based just seventy miles south of the Artic Circle and one of Facebook's many holdings (the company that acquired Instagram in 2012 for one billion dollars). While Instagram found success in the digital sphere with the exchange of images as data, it is the ease of which that Bizumic finds inspiration and leads right back to Kodak. Prior to filing for bankruptcy in 2012, Kodak employed over 140,000 people, with production sites and headquarters distributed the world over-as a startup and when purchased by Facebook, Instagram employed just thirteen. The imbalance is staggering and does best to underline the ever-pressing rate and efficiency of data-based technology and the manner in which it has rendered that which is analog obsolete on the brink of complete extinction. Yet, Where Instagram Lives offers a reminder that data itself, as much as it may seem ephemeral, requires a hosta base that is physical and material-wherever it might be. If the data center in Sweden dies, Instagram does with it, along with all of our "like" and "share" preferences, and online personalities: the real invaluable assets to such companies. The work's conceptual complexity and tone that borders on the enigmatic, is exemplary of Bizumic's work.

Where Instagram Lives also points to the artist's interest in photography as a medium and the deliberate use of, and playing with, the language of art-making and its formal qualities. The work follows a process that sees the shredded photographs enter a frame that is packed until full, the photos squashed against the glass, giving the viewer a partial view of the numerous layers of photographic paper. We may think of painterly abstraction, of color process–especially when knowing the treatment of the images, which bear CMYK with one color removed-but perhaps most of all we are left with the thought of the decay and death of analog photography and a foreboding sense that the future might find a way of replacing Instagram, just as it did with Kodak.

Death and mortality, and a certain outmodedness in regard to both Kodak and the language of art, is signaled elsewhere in Bizumic's work. Kodak(Presence) contains a sun-stained paper and two Polaroid photographs. The Polaroids and their arrangement stand as a clear reference to a moment in art history that was much concerned about painting's reduction, particularly Malevich's suprematist paintings, while their backdrop plays further with shape and form, as well as the idea of the frame. The sun-stained status of the paper might well invoke a history of performative actions, the foregrounding of process, by artists in the production of work, yet it also plays with an expanded notion of photography that runs right to the heart of the medium. The paper illustrates, and is, the capturing of light, what film does and what an image is essentially is. The removal of the photograph, which once sat in the same frame, lives on as a kind of ghostly presence and a further denial, or trace, comes by way of Polaroids that are both turned over, one positioned

inside the frame and the other on top of the glass, denying the viewer the possibility of seeing the image they once took.

Kodak: One Second After the Digital Turn is another work by Bizumic that similarly plays with life and death, with memory and potential. For this piece. Bizumic had the same image printed in three sizes and with three different photographic papers, each framed behind separate panes of glass in order to allow the materiality of the photographic paper to be visible. (On a side note, the framing of works is of particular important to the artist, as with the aforementioned work where the frame had personal significance, or in the case of the shredded piece where a framer was instructed to pack the frame with the splices of images.) Kodak: One Second After the Digital Turn turns the idea of frame as a conservation device and action to preserve into a kind of death-giving notice. Within the frame an original film negative is included. a Kodak 100T, 6 x 7 inches, and placed in the center of the work. like a nail in the coffin. Here, Bizumic negates any possibility of further editions of the work being made, since to do so one would need the image's original source, the negative, which has been isolated together with its reproductions-thereby also playing with the notion of fine art photography as the printing of images by multiple edition numbers. The parallel that the artist draws between form and idea does not end there however. The images in the picture depict a shot taken from Hauturu (Little Barrier Island) in New Zealand, and resemble a stock image that might be used by Kodak to advertise its products. Beyond its attractiveness as an image, the island pictured is significant for containing rare and endangered species; much like the film used to takes its snapshot.

While the majority of Bizumic's work casts a critical eye on the capitalist movements of Kodak and the sequential downfall they caused. Kodak: Box displays the companies charming side in its golden era. The piece features an image of Kodak's first commercially successful camera on the mass market. launched in 1888. It's successes were mainly down to the practicality of the camera: it was light and easy to use. It also contained pre-loaded film and a door-to-door developing service was offered. "You press the button we do the rest" was the advertising slogan. On finishing the film, customers were able to return the camera to Kodak for the film's processing and they would load the camera with a fresh film. The box camera foresaw many eventual technological happenings elsewhere, as it broke new ground. Kodak: Box also picks up on the product's design features: the box, made out of wood, having dovetailing joints which the frame of the work mimics.

Kodak's once innovative lead in design is also reflected by Bizumic elsewhere, providing another kind of antidote to the factual melancholy of its demise. Made in the UK (Body and Its Organs) (2016), consists of the parts of dissembled Kodak cameras: The Brownie Cresta, and Baby Brownie displayed over a number of vitrines, the parts of each camera are carefully arranged by the artist and placed on white backing. While the work lay bare the design details of each camera, the surprisingly large amount of parts and the efficiency of its build that enables all parts to fit into each camera body neatly, what is most powerful and captivating is how, through Bizumic's specific arrangements, the pieces take on a transformative effect where they oscillate between a sculptural action and gestural drawing.



Kodak (Presence), 2014 Sun-stained paper, Kodak Polaroid photograph 35.5 x 25.5 x 2.5 cm





All of the cameras are adjoined by their place of production, the UK, which was home to one of Kodak's most important sites of production: a plant in Harrow controlled the global manufacturing of Kodak's color negative paper. It employed 6,000 and had a 125-year reign. The employees became a community and housing was built nearby. Bizumic visited the site two weeks before its closure and documented the site and nearby areas. The piece. Where Kodak Used to Live, is displayed via a number of slides-that would have been produced at the site itself-housed in a number of slide holders and placed casually in a grid arrangement on hooks, allowing natural light to hit the slides and give the viewer a partial account of Bizumic's findings.

Another new piece that mixes formal innovation and conceptual rigor, pushing forward a new display device that meddles background with foreground and vice versa is Kodak employed 140,000 people, Instagram 13.The piece contains hundreds of 35mm film canisters, collected by artist's local film developers in Vienna, one of the last surviving labs in Austria. They are arranged in a grid formation around exhibition walls, each positioned with equal spacing and together forming a sprawling display which functions as a frame for other works by way of sections that are left blank. For a younger generation, the film canisters might seem strange and unfamiliar. For others, the canisters might trigger memories of a distant but not forgotten past, a past that might seem more joyous, more connective and more affecting, even in the face of technology and its acceleration that purports ease of use and claims to make our lives "better."

Bizumic's exploration of Kodak, which is in equal parts poetic and precise, indeed pictures the transition from filmbased photography to digital imaging as it developed. While it zooms in on one of photography's most iconic contacts, Kodak, and the fissures of industry production, both photography and Kodak as company is deployed to function as a lens through which to consider a larger picture and directed as such. Yet Bizumic's project tangles with much larger issues deliberately, uncovering how images and the technology that enables them influence not only aesthetic, social, and economic relations, but also the result when they are replaced and taken out of the picture.



Kodak (Box), 2014 Chromogenic development prints 40 x 40 x 6 cm















Post-Conceptual Analogue: Mladen Bizumic's Kodak Photographs by Stephen Zepke Mladen Bizumic's work begins from a deceptively simple question: 'What is photography?' While not the first to ask it, Bizumic will offer an original and complex answer that unfolds itself in three dimensions; 1) between analogue and digital photography; 2) between modernist and conceptual artistic practice; and 3) as a reflection on the social implications of globalization and corporate capitalism.

Bizumic's recent work focusses on the rise and fall of Eastman Kodak Company. Founded in 1880, responsible for popularising photography at the turn of the 20th century, achieving a 90% US market share in 1976, inventing the digital camera in 1975, but failing to put it into production and consequently filing for bankruptcy in 2012 after digital photography took away its market. As the statement accompanying Bizumic's recent exhibition Kodak: Reorganisation Plan (Georg Karal Box. 2015) puts it: 'Kodak invented its own "death".' It is this death that Bizumic brings to life, exploring the cadaver of Kodak with a morbid and sometimes violent interest. On the one hand, he turns it into a contemporary morality tale, a memento mori marking the fleeting vanity of corporate success, and on the other he re-engineers its corpse, Frankensteining it into a new and artistic form

The exhibition Kodak: Reorganisation Plan goes furthest in documenting the metaphorical dimensions of this shift, drawing attention to the psychological and social dimensions of the capitalist rhythm; market domination – bankruptcy – restructuring. According to Steven Sasson, the Kodak engineer who invented the first digital camera, Kodak executives suppressed his invention because they understood what its impact would be on their highly profitable business, a case of conserving the past against the unknown benefits of a future technology. If this story illustrates the short-sighted logic of capitalist "growth", then the trajectory of restructuring that came after is a 'happy ending' that obscures the jobs lost and lives damaged that inevitably result amongst workers. The walls of the exhibition are lined with sheets of paper Bizumic collected in the bankrupt ZNTK (Railway Rolling Stock Repair Company) in Poznan', where this exhibition was originally held. Redundancy means restructuring, which means job-losses and the technologizing of the production process in the name of greater "efficiency" (ie., the protection of profit). Bizumic places this story as the background of his work in the exhibition, encompassing it in these yellowed pages' quiet, melancholic testimony. Thus the "real" world frames Bizumic's more artistic project, which is to take the materials of analogue photography and "restructure" them, not this time in the name of some euphemistic "efficiency", but rather to explore the potentials of their material.

Analogue photography became redundant because it was too material, unable to dematerialise something into a binary code that can be downloaded anywhere and at any moment. That's a bit like Modernist art, whose materiality offered the viewer a sensation, an analogue of what it was. Conceptual art dematerialised art work, it produced meaning (rather than sensation), and turned art into an information technology. Bizumic's work occupies and animates this shift, affirming analogue photography's materiality within and as a conceptual project. This means Bizumic's answer to the question that we began with is utterly ambiguous - photography is both material and concept, a conjunction the work itself attempts to extrapolate.
Picture Material (Rochester NY) (2014) is composed of shredded photographs of Steven Sasson, and with some attention and the necessary information it is possible to grasp the 'content' of the work. But the shredding is certainly its most obvious aspect, the shredding machine operating as a psychopathprinter, voiding the photo's coherency as an object and a representation, but nevertheless composing a schizo-body of dispersed materiality. Like a modernist painter perhaps. A shimmering surface of blue obscures and overwhelms the photo's 'content', a violent machining of the material casts it into chaos a sensation emphasised by the work clinging to a representation that it is about to give up. Shredding destroys, it obliterates, it consigns 'content' to an irreversible and instant entropy. Becoming trash - but no, not quite. The work is poised on the edge of its own dissolution, perhaps painstakingly and only partially recomposed like in a bad spy movie, or more poetically perhaps, caught in the wind just before its pieces disperse, almost like a snapshot. But this process is also an analogue (or allegory? the ambiguity here is precisely the point) of the recent end of analogue photography, and of modernism too; redundant, expired, its material scattered, thrown away, reduced to simple and uninteresting matter without content. As such there is perhaps a certain Schadenfreude too, as the Kodak man's fractured smile is passed through the shredder of history and evacuated of any triumph. But the ambiguity is now evident - Picture Material (Rochester NY) offers information and meaning that emerges from a conceptual frame and a research based practice, but finds form through a material process that expresses its referents in the pathic vocabulary of modernism rather than through signifiers that would explain it to us. It offers, we might say, an analogue conceptualism, poised between matter and

meaning, making one into the other perhaps. By displaying the photo at precisely this point where its coherence has been shredded but is not yet incoherent, the object persists as an echo of what it was, and a whisper of what it is not yet, somehow suspended between life and death, profit and bankruptcy, analogue and digital, modernism and the post-conceptual, burrowing out a gap in time in which these oppositions seem to fold into one another, mixing promiscuously in a carnivalesque dance.

Is this Bizumic's answer to our question, is photography both analogue and digital? Jacques Derrida suggests precisely this, despite the substantial material differences between analogue and digital photography, differences of technique, of technology, even of their ontology itself. But then again, as Derrida always says, but then again whether its analogue or digital photography its the same thing, its representation, its always 'taken', we take a photograph from its original, re-produce it. (But if we know a little Derrida this is no surprise, because in the end he always writes that - its writing, geddit?). Is this then, the story Picture Material (Rochester NY) tells us? That the technological shift that its image both announces and in a certain way enacts, that this shift is not really significant when it comes to the question of the ontology of photography?

Maybe the work could say that, but its not the most interesting thing it could say, let alone the most interesting thing that we could say about it. Bizumic's work is not categorical, it doesn't present conclusions but rather drags problems through matter, problems whose disruptive but always elegant force rearranges the self-evidence of their appearance. A problematic Idea, Gilles Deleuze tells us, is an intense difference (analogue-digital) actualised in matter, a potential force expressed in



Picture Material (Rochester, NY), 2008-2013 Shredded chromogenic prints 100 x 70 x 4 cm





Kodak (One and Three Images), 2015 Chromogenic print, USB stick, 35 mm slides, original 35 mm Kodak film Elitechrome 200 ED-3 10 parts each 30 x 30 cm



change and experiment, or what he calls 'thought'. Perhaps photography is just such a 'problem', and Bizumic's work is just such a material 'thought'.

Let's look at Kodak (One and Three Images) (2015) to see how this might work. The work consists of 9 framed prints made from slides, which are presented together in a separate frame along with the data-stick carrying the scan files from which the photos were printed (it now being impossible to print them from the slides themselves). This conceptual formalism is an obvious update of the chairs of Kosuth, but also totally different. Kosuth's work asked which was the "real" chair, with the implication that a concept or "idea" of the chair defined its identity, and simply expressed in language, material or photograph. The wider point was that this was also true for art: Art as idea. as idea, as Kosuth rather pedantically put it. In Kodak (One and Three Images) however, the trinity of the image is not unified in a dematerialised concept. but rather seems necessarily dispersed across its analogue and digital formats. Furthermore, the gesture of showing this material dispersal of the image suggests a conceptual purpose, and obscures what is shown (it is a good copy of Kosuth in this respect). The showing of the support - material, conceptual, institutional - is a common gesture in Bizumic's work, but does it announce his work as categorically post-conceptual? Let's say - provisionally not yet, and try to look at the photographs 'themselves'. Peering around the concept we see that they are anyway hard to read, concept or not. They show a tree and the corner of a building, and maybe something hanging in the tree, or maybe not. It seems to be winter but everything is murky and obscure because something has gone wrong with the process, suffusing the photos with

a purple, crepuscular light. As well, scratches and other damage obscure the image, a result of the roll of film being in the bottom of Bizumic's bag for years, before being printed. These images are, we could say, "doubleanalogue", analogue photos bearing the marks of their direct and accidental contact with other things, sloshing around like trash. We see again the violence of analogue im-printing. its up-close and physical, its bodies that touch. The image "itself" a tree in Belgrade covered in cascading ice, a 'moment' that Bizumic spent three films trying to capture, just right. Photography's ability to capture a moment is often considered to be its "essence", to pull an image out of the flow of time - to "freeze" it - so we can appreciate its aesthetic qualities in isolation, in all their glory as 'art'. But this moment was obscured by time before it was developed, re-emerging a bit worse for wear, wearing the rich patina of its forgotten and chaotic life like scars on its back. It is in this sense an analogue celebration of the analogue itself, but one that presents itself through a conceptual frame, and requires the digital to appear in the first place.

No doubt these hybrid images - analogue/ digital, material/conceptual, modern/ postmodern - as well as the showing of their process of hybridisation, are typical of "postconceptual" art. But what does this mean? Certainly Bizumic's work employs the formulaic gestures of showing the slides and data stick, as well as including the film's sprocket-holes in the prints, but there are other aspects of the work that resist this conceptual frame, that burst through its slick schtick. Why, for example, are not all the frames reproduced? That would be more consistent with the dry logic of conceptual work. The 9 photos we see implies a subjective selection that goes beyond the conceptual imprint, a personal investment that goes beyond the works



Joseph Kosuth, One and Three Chairs, 1965 Wood folding chair, mounted photograph of a chair, and photographic enlargement of a dictionary definition of "chair" Larry Aldrich Foundation Fund © 2018 Joseph Kosuth / Artists Rights Society (ARS), New York Courtesy of the artist and Sean Kelly Gallery, New York



conceptual frame or metaphorical content. In this way, the materialisation of time achieved by the analogue begins to assert its aesthetic presence in the present. The photos are a lovely shadow of purple and mauve, a beautifully putrid colour unnaturally formed by the chemical process gone wrong - by, we might say, the unconscious processing these images received in the dark depths of Bizumic's bag. They are a colour that already announces these images as redundant, spoiled, and anyway achingly nostalgic for the singular "moment" of photography that has subsequently been beaten out of them. But all of this past tense, this material process, this historical asignificance, disengages itself from the conceptual frame that "shows" and contains it, and like the return of the repressed offers us a touching weirdness, a sensation that these images "presence".

Of course we can justifiably object that this "presence" also contains a nostalgia for what has left us, which is perhaps the case with all analogue photographs, and part of their attraction in the first place. With this proviso then, we see how Kodak (One and Three Images) explores the same 'problem' as Picture Material (Rochester NY), the animating tension of matter and concept, analogue and digital, history and the present. But whereas Picture Material (Rochester NY) sought to channel the redundancy of analogue photography into a modernist art work, Kodak (One and Three Images) seems to work in the other direction, and tries to convert analogue photography into a concept. In both cases, however, Bizumic is able to hold the poles of his problem in a relationship of mutual deformation, where we move from one to the other in a rhythm that keeps changing the nature of its terms, and so develops for itself. These works pose our original question 'What is Photography?' in such a way as to suggest

that there is no answer except the ongoing process of placing technology and artistic frames into contact. What emerges is not a definitive answer, not even a provisional one, but rather a performative process that insists on photography as an experimental art form, which means it insists on the materiality of the analogue photograph. Even if this means that the photographic 'image' is understood as being something without clarity, whether technological or conceptual, and instead as something far more problematic, a living example of materialised thought. The real question then, would be 'Is that Art?'































The Rise and Fall of Kodak's Moment by Becky Allen

On a shelf in his office in Cambridge Judge Business School, Dr. Kamal Munir keeps a Kodak Brownie 127. Manufactured in the 1950s, the small Bakelite camera is a powerful reminder of the rise and fall of a global brand – and of lessons other businesses would do well to learn.

Earlier this year*, Kodak filed for Chapter 11 bankruptcy protection. But when Kamal's camera was made, the company bestrode the world of amateur photography – a world Kodak itself had created.

Established by George Eastman in the 1880s, by the 1950s Kodak had the lion's share of the US amateur film market. "Kodak was a company at the top of its game," says Kamal, who has studied the Rochester-based business for more than a decade.

"Kodak controlled almost 70% of the highly lucrative US film market. Gross margins on film ran close to 70%, and its success was further underpinned by a massive distribution network and one of the strongest brands in the world. The company completely dominated its industry," he says. "And then, in 1981, along came digital."

Thousands of words have been written recently seeking to explain Kodak's failure. The company, all agree, was slow to adapt to digital, its executives suffered from a mentality of "perfect products", its venture-capital arm never made big enough bets to create breakthroughs, and its leadership lacked vision and consistency.

None of this analysis, however, fully explains what digital - a technology Kodak pioneered - did for the company. Understanding that, Kamal argues, requires a deeper historical and social approach.

"Photography is very much a social activity. You can't really understand how people relate to their pictures - why people take pictures unless you do a social analysis which is more anthropological or sociological," he explains. "Whenever I ask why a certain company that has fallen on hard times is doing badly, I always start by asking why it was successful in the first place. That is where the answer lies."

For three-quarters of the twentieth century, Kodak's supreme success was not only developing a new technology - the film camera - but creating a completely new mass market.

During the nineteenth century, photography had been the exclusive preserve of a small number of professionals, with their large-format cameras and glass plates. So when Kodak invented the film camera, it needed to teach people how and what to photograph, as well as persuading them why they needed to do so.

"Kodak is the company that made photography a popular pastime around the world. It made a tremendous contribution to how we see things," Kamal says.

Kodak's high-profile advertising campaigns established the need to preserve 'significant' occasions such as family events and holidays. These were labelled 'Kodak moments', a concept that became part of everyday life.

And it was women Kodak cast in the leading role. In its advertisements, women held the cameras, busy preserving moments of domestic bliss for posterity: "Kodak knew how to market to women. If you wanted to be seen as a caring mother and responsible housewife, then you needed to record your family's evolution and growth," he says.

But women were only part of the story. It was they who took the photographs, but the other half of the Kodak moment required a subject - birthday parties, sporting success and, crucially, family holidays.

"Kodak also played a big role in converting travel to tourism. The idea was that if you hadn't brought back pictures from your vacation you might as well not have gone," says Kamal. "For them, photography was all about preserving memories for posterity, photography was all about sentiment, and it



Kodak (Thin Layers of Empathy), 2016 Chromogenic development print, postcard, Kodak Sound Recording 6.25 mm, 35 mm film roll package lid 91 x 52.5 x 3.5 cm





EXINCOLOR PROFESSIONAL S C-22



1970s

1960s



1990s



1990s

Shirley cards, named after a former Kodak model, were images used as the 'standard' for skin color calibration in photo laboratories across the world. Courtesy of The Eastman Kodak Company, Rochester, New York



Kodak Instamatic Camera featured at the Kodak Pavilion, New York World's Fair. Advertising published in *Ebony*, August 1964 Volume 19, No. 10 was women who were doing this."

By the 1970s, more than 60% of pictures in the US – the world's largest photography market – were being taken by women. And it was partly how men – rather than women – responded to the digital revolution that Kodak couldn't cope with.

Digital disrupted the company's equilibrium in two crucial respects. Firstly, it shifted meaning associated with cameras and secondly, digital devices allowed newcomers such as Sony to bypass one of Kodak's huge strengths - its distribution network.

The knock-on effects of this shift were enormous. Digital cameras came to be viewed as electronic gadgets, rather than pieces of purely photographic equipment. As a result, he explains: "The identification of cameras as gadgets brought about another significant change: women were no longer the main customers, men were. "The gender shift led to the third source of disruption for the photographic industry in general, and for Kodak in particular. With digital cameras, images could be viewed on cameras, mobile phones, or computers, without the need for hard prints. And with women giving way to men as primary users of cameras, printing plummeted.

According to Kamal: "The people taking pictures suddenly changed, from 60% women to 70% men. Kodak didn't know how to market to men. But even if they could get them to buy, they didn't want to, because men don't print. Unlike women, they hadn't been socialised in the role of family archivist."

Faced with such an enormous threat to its business, Kodak did what many companies do in similar circumstances - ignore the problem in the hope it goes away, and when it doesn't, deride the newcomer.

"Some things do go away - not all technology gets diffused," Kamal says. "When that fails, the second reaction is usually derision - it'll never take off, it's too expensive, it's too difficult, the print quality is too bad, people will never part with hard prints. When I talked to Kodak executives they would always cite the same example - if someone's house catches fire, the first thing they rescue is their photographs."

Having played such a central role in creating meaning for photography, the company failed to believe that meaning had changed, from memories printed on paper to transient images shared by email or on Facebook.

"The change from preserving memories to sharing experiences, and from women to men - these were things Kodak simply couldn't handle," says Kamal, who saw the writing on the wall when he visited the company's senior management in Rochester a decade ago. "By the end of the day I was convinced the company was not going to be around much longer."

In 2006, Kamal sent a letter to the Financial Times, pointing out that Kodak's strategy was fundamentally flawed. "Kodak is better off taking a leaf out of Lou Gerstner's strategy for re-inventing IBM – from a manufacturer to a service-provider," he wrote.

"Kodak needs to disassociate itself from its traditional strengths and come to terms with the fact that this technology will be commoditised sooner or later. What they need is a new business model for an environment in which people do not 'preserve memories' but 'share experiences' ... I am afraid Mr Perez's [Kodak CEO] strategy of engulfing the consumer in the Kodak universe has a low likelihood of success."

But rather than a new business model, what Kamal had seen in Rochester was a digital imaging division under pressure from its consumer imaging counterpart, and a company unable to shake off a corporate mindset that had developed over more than a century.



Uncle Bob under the Coca-Cola Kodak Sign, 1968-2014 analogue photograph, envelope, postal stamp 42.5 x 42.5 x 4 cm



Kodak (George Eastman House), 2015 Scratched postcard 26 x 29 x 2 cm "Its focus on retail printing, investing in inkjet printing research and development, and selling sensors to mobile manufacturers - altogether, these never added up to a coherent, sustainable business model. And the digital guys were always under pressure because they were seen to be cannibalising sales of much more lucrative products," says Kamal, who thinks Kodak should have cut the digital business loose and freed it from the Rochester mindset.

In his view, Kodak needed to let a new generation of users and entrepreneurs take charge - people who could embrace uncertainty and were prepared to be driven in unforeseen directions - a far cry from how the company had spent its life.

"It's important for companies to reinvent themselves. Kodak had tremendous market power - one of the things that allowed it to survive thus far. But for this kind of reinvention, where you're faced with a technological discontinuity which has little in common with what you've been doing, you need to radically alter your mindset or worldview and emerge as a completely different company. IBM is a good example of this kind of reinvention, which was a huge cultural shift and took several years. But Kodak wasn't willing to part with their legacy."

The challenges Kodak faced are not unique, so what can other businesses learn from its failure? Clearly companies that derive a large proportion of their profit from a single product – in Kodak's case film – are more vulnerable. But having a corporate mindset open to new ideas and able to embrace uncertainty is essential.

According to Kamal: "The important things are not to tie the weight of legacy assets onto new ventures; to refrain from prolonging the life of existing product lines, while trying to create false synergies between the old and the new; and, most of all, to base strategy around users, rather than the existing business model."

As the company approaches its 130th birthday, what will be its legacy? Those precious family albums, perhaps, and our enduring passion for photography. But its impact could have been even greater, and longer-lasting.

"There was a time when photography was known as 'kodaking'," he concludes. "I don't think Kodak will survive. Someone might buy the brand and its assets, but Kodak is never going to be Kodak again."



Kodak (Double-Sided Image), 2014 Chromogenic print on Kodak paper 52 x 62 x 3 cm



Kodak (George Eastman Living Room), 2015 Scratched postcard 21 x 28 x 1.5 cm

Kodak's Moments



JULY 12, 1854



Courtesy of The Eastman Kodak Company, Rochester, New York






1900 The Kodak Brownie is introduced.

BROWNIE

The Brownie was the first affordable camera produced for the masses. Its introduction in 1900 allowed for the birth of the hobby of photography. The camera sold for \$1 with film costing 15 cents.





1937 Kodak slide top-loading slide projector is introduced.

1950

An 18'x60' Kodak Colorama displayscreen is installed in the Grand Central Station terminal. Dismentled in 1989, it featured many iconic photos over the years.

1935 Koda

Kodachrome debuts, becoming the first successful amateur color film.

KODACHROME

The first color still film, revolutionized the industry. The film used a subtractive color method. Kodak halted production of the Kodachrome line of film in 2009.

1878

Eastman displays the effectiveness of gelatin-based dry plate photography.

1928

16 mm Kodacolor film allows amateur cinematographers to shoot color movies.

1955

Shirley cards introduced by Kodak to set photography's skin tone standard.

Courtesy of The Eastman Kodak Company, Rochester, New York



1965 Kodak patents Carousel Slide Projector.

CAROUSEL

Originally invented by Louis Misuraca, bought by Kodak and refinded by Hans Gugelot and Reinhold Hacker in Stuttgart in 1963. The Carousel is part of the permanent collection at MOMA, New York.



1975 Kodak invents the world's first digital camera.

FIRST DIGITAL CAMERA

invented by 25-year old engineer Steven Sasson while working for Eastman Kodak Company in Rochester, New York.

1977

The filmmaker Jean-Luc Godard refuses to use Kodak film in Mozambique. He complained the film, developed for white skin tones, was "racist."



2001

The Easy Share system is unveiled, offering a newline and docking stations.

EASYSHARE

Kodak's collection of digital cameras, all-in-one Inkjet printers accessoires an online services fall under the EasyShare brand.

2010

Steven Sasson, awarded the National Medal of Technology and Innovation by the President of the United States.

1963

Kodak's Instamatic cartridge camera was introduced. High demand for the camera meant more than 50 million were produced before 1970.

1986

Kodak releases the Kodacolor VR-G line of film, advertised as being able to "photograph the details of a dark horse in low light." **1989** The Kodak Fun Saver one-time-use camera is introduced.

2017

Kodak reintroduces Ektachrome, the slide film.





Steven Sasson in 1973 as a junior engineer Steven Sasson in 2005 with the digital camera he constructed for Kodak in 1975 Courtesy of Steven Sasson, Rochester, New York

The Man Who Froze Time Mladen Bizumic in Conversation with Steven Sasson

Mladen Bizumic: Let's start at the beginning. Soon after you finished your Master of Science degree at the Rensselaer Polytechnic Institute (RPI) in Troy, NY you got a job as an engineer at Kodak. You were in your early 20s, right?

Steven Sasson: It's funny how I remember it. I started in late June 1973. My birthday is July 4th and I wanted to work so I could get my birthday off (laughing)–I was almost 23.

When you started at Kodak did you have a general idea of which research you were going to be working on?

No. At Kodak you interview at different parts of the company because it's a very large company. So I interviewed at R & E (Research & Electronics) and Manufacturing and other areas. Kodak was interested in hiring a lot of electrical engineers, which they traditionally hadn't done. More and more camera costs were going into electrical components such as flashes, exposure controls, film advance and stuff like that. There were a lot of electrical engineers interviewing and after I did my interviews they asked where I would like to work and if any place appealed to me.

I liked the A & D (Apparatus Division) research laboratory. It was a very interdisciplinary space–a large area made of landscape offices–and there were all different disciplines of people: electronics, chemistry, mechanics, physics, mathematics. There were groups that worked on things and solved problems.

I just thought that would be a cool place to work.

What about your interest in photography?

To be honest, I didn't know much about photography at all. I'd taken a course in optics at school. But I was interested in light and how it would affect silicon. I didn't come to Kodak for that, but I did find it interesting. I did a paper at the RPI on how light affects silicon devices and I did a lot of reading about electrons and how they were affected and things like that. I've keep this paper to this day. Actually, I thought I was going to fail. You know, when you're learning about something new you feel like you're the dumbest guy on the block, writing this paper as if you know something, but you just learned it twenty minutes ago. Consequently, I wrote this paper and my professor gave me an "A" on it and said: "You really did some good thinking here." I think that inspired me to keep going with this. So it was that background and the atmosphere I found myself in-very eclectic. and people just interested in...everythingthere was just no limit. That kind of thinking, that combination of things, positioned me to take advantage of this opportunity that was presented to me in the late 1974 / early 1975. I can't remember exactly when I had a conversation with Gareth Llovd...

Gareth Lloyd was a leader of the group?

He was a leader of an electronics group. We had all of these different groups: electronics, physics, math, chemistry, systemmodeling. They solved problems for manufacturing new products and spent a lot of time interacting with each other. The electronics group maybe had about fifteen people in it including eight or nine engineers and six or seven technicians. We would do projects and work with the other groups for bigger projects. Sometimes we would do research, but not fundamental research. It was in that spirit that Gareth came to me one day and offered me a choice of two projects to work on because I'd just finished the lenscleaning machine project and doing a lot of digital stuff. I didn't learn a lot about digital in school; I learned it at Kodak. He said: "Would you like to do system modeling on the Kodak XL movie camera exposure controls?

Or we have this new type of device called 'a charge couple device imaging'; would you like to see if you could do anything useful with it in imaging performance? You see, because of my silicon work at the RPI I said yes. I remember–I was standing next to my desk in the office, halfway in the hallway–the conversation was maybe 40 seconds. That was the total extent of conversation.

And after that conversation? The process of planning, testing, and designing-how long did it take?

I don't have any notes! It's amazing how few notes I have about the progress I made on this thing because I only kept notes when I had external meetings.

I don't know why. I had a little book and I would take notes when I met with people from outside the lab. But when I worked inside the lab I didn't really keep any notes. I don't remember exactly when—my guess is late 1974 or early 1975—I had that conversation with Gareth. I ordered a CCD (charge-coupled device) and that was the only thing I was able to buy. This wasn't a big project...

This was one of many projects happening at the same time?

Yeah. And I was doing other projects too but I thought this was really a cool one. I liked it, but it wasn't a big project and no one knew I was working on it.

Nobody anticipated what was to come?

No, no... Nobody asked me to build a camera! It wasn't an issue at all. With this new type of device the question was-could we use it for measuring. Nobody talked about the pictures and nobody, as far as I knew, worked with these things before. So I went to the library and read as much as I could, but there wasn't much there. And I ordered two [chargecoupled devices] in case I broke one. And that was all I was allowed to order. I didn't know what I was going to do with these things. Gareth simply said: "Play with it." I never really talked to anybody. It wasn't like today where you fill up a project plan, a budget and all of that.

It was open-ended and experimental?

It was very experimental, very openended. Nobody knew I was working on it. Not that I was secretive, nobody cared!

Can you talk a little about how it happenedthis process of discovery-and how did colleagues receive it?

Well, after I worked on it for a year or so! I got really passionate about it. I didn't know if I could actually build this camera and the only person I spoke to about the camera Gareth. I remember the actual conversation we had the day it worked. He didn't even know it was a portable camera! We built the camera and the playback system—me and Jim Ship, the technician who helped me build it—and Gareth said: "Bring some people to the lab and show them." I said: "No, it's portable.

I can carry it." I remember the conversation and how much I talked to Gareth about it. I would visit with him and tell him what I was doing, but it was one of those side things. He said: "Keep me out of trouble and do something interesting." But it wasn't anything that anybody expected any results from.

Sure. I see...

You know, the camera was a size of toaster and I could pick it up and carry it around. At first, we showed it within the laboratory and to managers. We would meet in the conference room in the A & D laboratory. People would sit down at the table and I would enter the room with a camera. I would take a picture of you– head and shoulders. And the tape would start to move and that's how I knew it worked. It would take twenty-three seconds to record the picture. It was available at 50 milliseconds exposure time so I captured it fast but it took a while to record on tape. And I would take a picture of the first person on the left. I always took two pictures. I did that for two reasons: in case one didn't turn out and also because if I took more than two pictures my batteries would run low. Even though I could take thirty pictures on a cassette-I designed it to take thirty–I very rarely took more than two because it took a long time to get them off. We would then set up a playback unit, which was a whole development in itself. A lot of people don't realize how much work went into it. The camera itself was complicated, but the playback system itself was also very complicated_nobody talks about it_because you would need something to view the picture, right? So I would hand a tape to Jim and he would play it back and up it would go on a TV screen. And here it was in 1975. I was taking available light, instant digital pictures and basically showing them in about a minute.

What was the reaction like?

Well...the reaction was interesting. People were very curious about it. It depends on who our audience was. We showed it to many different facet audiences. If you work in a big organization that has bizarre organizational cultures, then you show it to certain people before other people and that kind of thing. And I didn't determine the audience: it was determined for me by my supervisor and the head of the laboratory, Bill Feldman. We would show it as we moved up corporate ranks: and also scientific ranks: and technical ranks. So, different audiences reacted differently-to answer your question. The corporate/business people were intrigued; they were also cautious. They didn't want to get too excited about it. Gareth has since passed away, but his wife told me a story

about when I showed it to the highest manager, a guy named Doug Harvey who was in charge of the Apparatus Division. He was pretty high up in the company. I remember him...I remember him because he was a big and imposing guy. He came to the lab to look at a picture. We had the camera set up in the lab and we took a picture and he was wearing a ring that caused a reflection. He asked "What's that?", and I said "It's your ring." As they walked out of room, they didn't talk to me, but Gareth followed him and asked "Should we keep working on it?", and Doug Harvey said: "Yeah I guess so... but don't talk about this and I hope you fail." And he left...

Doug Harvey wasn't very supportive...

I mean these guys weren't dumb. I mean it was a pretty crude photography and I wasn't endangering film photography in any way at that time. But they were also smart enough to know that I was a 25-year-old kid in a laboratory doing no film, no paper photography and looking at the picture right away. What could happen here? They weren't dumb. That was that part, I would say, caution—a reactionary caution.

What about other people who had a chance to see it? Were they more supportive?

There was enthusiasm too. We showed it to some business people that were in marketing in different areas of the company. I remember one fellow. I remember exactly where he was sitting on the far, right side. It's funny who I remember this—it's been so many years... and how he got excited because we got a picture of two people. He got up and said: "My God!" and took a [bank] check out of his wallet and slammed it on the paper. He said: "Can you do that? A picture of a check?" And I answered: "I don't know." And we tried and up it goes on the screen. He runs to the screen and looks at it and says: "Not enough resolution." And he



Kodak (Photo Confetti), 1975-2014 Photo proofs on Kodak paper, modified wooden box 41 x 30 x 3 cm



Kodak (Rolls), 2014 Rolled Kodak analogue print, 35 mm photographic roll packaging 87.5 x 62.5 x 4 cm

PHOTOS TAKEN EACH YEAR

1826-2011



Courtesy of The Eastman Kodak Company, Rochester, New York

looked at other technical people at the table and said: "This thing works better than a whole room of equipment that I've ever seen. This thing could be great for checks." You know for Microsoft, for electronically doing things. This was his idea and he wasn't a technical guy. he just wanted to see a simple demonstration. The fact that I could do that right there gave him such confidence that this was real. In other words, sometimes when you show things, especially technical demonstrations, there is a lot hidden. What was nice about this demonstration is that it wasn't hidden. It was what it was. It was very simple, and it was crude, but it was a complete system. Cameraviewing-story. It was all there.

I could take a picture of his check just as I would take pictures of people and he really loved that. That was technology working for him.

So he could see it being used in a way that would suit his needs...

He had a little experiment in his head. "Take a picture of my check" And I did it right there. The fact that I could do it right thereit wasn't enough resolution as you would expect, it was only 10,000 pixels-but the fact that I could do it right there convinced him that it was real and-wow-I can see how this could be useful. That's an example of the reaction that we got.

Can you talk a bit about the period after these demonstrations to all kinds of people within the company, and getting some support but perhaps not enough for this innovation to reach a new level of development...?

You have to remember I was twenty-five years old. I was a junior engineer in a huge laboratory in a giant corporation. I was told that while people have heard about the demonstration because it was good and-even the Kodak Office, which wasn't the corporate headquarters-had asked about but said that they didn't want it to shown to them. Nobody told me this, but I heard it third hand. And at the time I was a little bummed out about it. just because I never met corporate officers in my life and I thought it would be so cool to go there. But they didn't want it shown to them... It took many years and some maturity on my part to realize why. I mean this thing generated so many more questions than answers. And if you're a corporate guy, if you're a research lab head or a technical lead or something, and a big, big boss comes and you take this picture and show it to him, he's going to have a lot of guestions. And he's not going to ask me, he's going to ask those guys. Those guys are responsible. And they don't have answers. I didn't have answers either. And because there were so many more questions than answers I think corporate protectionism came into play and they said: "No, it's not ready for primetime."

How does that make you feel now?

Oh I understand. It makes sense. It would create so many more questions than answers. This demonstration came from a little bit of skew but it wasn't Corporate Research & Development: it was Applied Research & Development. As corporations go, there are these little walls that get built between organizations. And I think the expectation was that this kind of demonstration would've come from Corporate Research & Developmentwhere they would do fundamental researchnot from a 25-year-old kid. I hadn't a PhD; it wasn't a team of people. It was just me and a technician. That's what it was. I think that created some hesitancy, but I wasn't ever blocked. They wanted to keep working on it but I wasn't in charge anymore. They put a more senior engineer in charge, which I was okay with at the time. I wasn't thinking about

it the way people think about it today. I called it "my baby" and it was a really interesting project. I wasn't thinking from a historical point of view. If you would've asked me—as people did many years later—about digital photography when it started to mature in the early 1990s, I would say: "Yeah, I've taken the first digital snapshot. So what?" That's basically what I would have said.

And what happened next?

We filed a patent. I didn't even know what a patent was! I worked with Dennis Monteith, an attorney who wrote the fundamental of it. When I read it now; it was actually well written. Dennis did a great job because he captured the essence of the invention. The invention was basically how to electronically capture a photo site (a charge pattern), and then digitize it and store it rather quickly, all in real time, and then slowly read out from the memory to a more permanent form of storage. That was the fundamental nature of the patent and represents the fundamental architecture of digital cameras, even today. That's how it works. All the credit goes to Dennis Monteith in synthesizing this down. I built and designed all of this because it was the only way to figure out how to do it. I didn't really think about it_"here is the concept"_[for that] it took Dennis to work with me and write it-this is fundamentally what you are doing. I think a lot of it; when I look back I learn so much about these things. But when I was living through it at the time I wasn't thinking in these big terms people talk about today. I was thinking: "This is really cool, there are a thousand of questions I don't have answers to." I became involved with digital photography back then and I spent my whole life doing digital photography, since 1975. I worked on different aspects of digital photography whether it's digital storage, or image compression, probably before most people.

But it was very immature and really didn't have much practical use. It was a research kind of thing; it wasn't really something I could put in a product. It was only in the late 80s that we put it in our first product.

Do you think that the late 80s was already too late, or that it wasn't marketed enough or film was still too popular?

No. there were a number of barriers... But film was cool. Film was excellent. Nobody has greater appreciation for the existing technology than the guy who is trying to displace it. Because you know how good it has to be-you get told every day by people who really know that technology and you don't. Now I must say there were cultural barriers that impeded our free thinking around this as well. But as we went through the 70s and the 80s and the 90s, a number of revolutions took place that without them digital cameras wouldn't be useful today-the computer, the internet and that kind of stuff. All these things were outside of Kodak's control. They were necessary within the purview. If you have a culture that controls every element of an imaging chain for a hundred years and all of the sudden a whole bunch of companies in totally different disciplines start looking at your area-you get kind of defensive. Kodak was a bit paranoid. They spent a lot of research dollars and did fundamental research into digital photography through out the 80s and the 90s that generated a rich portfolio of digital camera patents that have received a lot of publicity lately. It fundamentally got digital photography right when most other people got it wrong: Sony and Mavica for example. You know, I studied Mavica in the 80s when it first came out. I was doing signal analyses and I studied it to see if this could be a way this is going to go. I thought it was great for two reasons. For one, Sony was doing it, which scared Kodak's management, which

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Patent drawing for the "Electronic still camera," filed in the United States in 1977. Courtesy of The Eastman Kodak Company, Rochester, New York





Kodak (Silent Partner), 1961-2015 Kodak 6,25 mm tape and sound recording packaging, Kodak 6,3 mm recording packaging 82.5 x 62 x 4 cm means they will pay attention to anything we were doing. The other reason is that I knew Sony was wrong. If you look at what they did with the encoding schemes; they were taking compromises on image quality in order to enable electronic capturing storage.

And digital photography was yet to come?

If you think about the existing technology like film, you can't displace technology by being worse than that. You have to be as least as good and then exceed it in one or more attributes, then you can start to displace it. You can say I've got this great camera that uses no film, but the pictures will never be as good as film. I knew that was wrong and we proved it. I did papers on that. I didn't publish them, but we looked at signal analyses and ploughed it out and I showed it to people and all the spatial frequencies were gone. And people would say "What's that gotta do with photography? Film captures everything. What's this business of throwing away frequencies?" So I knew this was never going to replace photography, but what was? That's where I think a lot of people at Kodak realized it wasn't going to revolve around the television set, even though the television set was what we were using. It was going to revolve around the computer because it didn't have the encoding limitations that the television set had. They were necessary for that time, but you needed more to replace photography. Kodak was doing a lot of advances in research in megapixel sensors. Up to this point, people were not interested in going much beyond Vidicon tubes because they wanted to replace them. But Kodak knew it had to be bigger than that. It had to be millions of pixels and it hadn't been built. Kodak started and even to this day they make very large images. So that was one thing they knew; they read the papers right. Also, how would one create the architecture of

the image compression? I worked on it in the 80s and I would say I built the camera with Bob Hills that we called "E-cam" in 1989. If I showed it to you today it would appear much bigger than today's cameras, and it had a memory card. We built six by hand and we showed them to people. It had a 1.2 megapixel sensor and image compression and it was probably a precursor for all digital DSLR cameras. It didn't have a display on the back. We showed it to [Kodak] Marketing and asked if they could sell any of these and they said: "Sure, we can, but if it becomes at the expense of any film cameras we're not going to do it".

That had to be a massive dilemma for them.

In the 1990s it started to run into the two cultural barriers: "Why sell this thing when it cuts off my film?" and the compromises we were making in image quality. The megapixel count was still lower than the 35mm film frame and we were using image compression in order to do that, and although it was very good, people had a cultural issue with it. The idea of capturing millions of pixels and then throwing away 80 or 90% of that data (even if it's not information, it's data) was a cultural problem for people. Those were the cultural barriers that we needed to overcome. Kodak started producing professional cameras in the early 1990s and they were good enough for the application in terms of image quality and you could see the image right away and you could transmit it too. These photographers paid \$25,000 for this giant thing to carry around because they could get pictures right away. So we had to exceed in one or two areas.

Basically it accelerated to entire process of taking the images and sending them directly to the receiver ... it was supposed to save time, right?

And that was money. But these cameras were very expensive when we started to make

them. They were big cameras too. The DCS (Kodak Professional Digital Camera System) 100 was still a big camera but a self-contained camera that could offer immediacy, and you could view the image right away and you could send it and yes, that was money. Photojournalists or journalist organizations would buy them and that enabled us to get into that business. But we didn't get into the consumer business.

Sure. Do you think, at that time, Kodak started looking at some kind of balancing act between analog and digital photography or did they see this new technology as a threat, and something introduced at the expense of film?

Everything was seen as being at the expense of film. It was still hard to make money from this stuff and there was no ongoing revenue stream. And there was still a cultural issue. Never discount the power that culture can have over the course of development. Kodak was accustomed to supplying the best possible pictures in the most reliable way, in an economical way. Think about these early digital cameras. They were expensive and not necessary reliable. Our salesmen had a very hard time selling these things. You had to have a special sales force. And then, where is the revenue stream? Where is the business? So nothing looked terribly good for these things. Kodak was pioneering this work but at the same time the world was looking and saying: "Tell us when it's okay to switch." And the film? It was doing wonderfully, thank you very much! The [film] images were still the best. It's like riding two horses. And inside the company there were two camps. There was the digital camp that was doing all of this hightech stuff, great for shows, but made no money. And there were the film guys who made all the money. And they supported the other guys. It was a bizarre way to do

things. But it was what they had to do and balance off those two. But there were really no inroads against film for many, many years after that. The film transition was in the 2000s and I was sorry to see it happen. And that's just because technology had to get to that point. And that's not only the capture and the cost and the speed and the resolution, also the ability to store the images, to manipulate them with computers, Photoshop, and desktop printers. It took another decade to shake that out to the point where it dropped that easy. In the late 90s, we would take our digital camera and do a print and we used to call it "the chain of pain" because there was so much custom work that had to be done.

The whole process of photography became a lot faster, but also more fragmented?

Remember this...for a hundred years. Kodak had done all this work for people and they could guarantee the chemicals they use, the processes they use, the very machines they use...They controlled the entire chain and now the chain is broken up, bifurcated. Sony makes a computer; Apple makes a computer; and Photoshop is made by somebody else; the ink is made somebody else again. Who controls this? People come up with standards and all of the rest of stuff but it was still difficult. So who do you blame when you get a bad picture? The guy whose name is on the camera. There was a real difficulty in the intervening years between the early 1990s and the early 2000s because-even though it was technically possible and everybody was excited about it-before it could really take over it really had to get to easy, multimegapixel resolution, small camerasinexpensive, reliable-and a way to get the prints or view them or whatever you wanted to do. Kodak was trying to come up with a business model around these things, but none of them was nearly as good as film.



A selection of Kodak digital cameras including the Kodak Easyshare One, the very first digital camera prototype, Kodak P880, and Kodak V570 (clockwise) Courtesy of The Eastman Kodak Company, Rochester, New York



Picture Material (Tito, Jovanka, Nixon, Pat), 2014 Shredded chromogenic prints 42 x 32 x 3.5 cm Consequently, it was problematic for Kodak to jump in with both feet. Even though they spent a lot money and time doing this stuff they never made the amount of money they wanted to because they were comparing it to the film model that George Eastman developed and that's it ...

At the same time I have a feeling that other producers of digital cameras were coming up with some quality cameras, particularly Japanese producers such as Nikon or Canon...

Oh yeah. There were excellent... I would say if you were a film guy you'd get into heated debates over what the resolution is for a digital camera that equals 35mm film. And I've been a part of these debates for many years. Who is right or wrong? My point is let's put a stake in the ground: a 6-megapixel image it is good enough for most people. I'm sure there are a few people who have a problem with that. And that's why we got 12, 18, 42, 36 megapixel today. But for an average person taking snapshots, 6 megapixel is probably okay. Once that point was reached in 2004 that was it. Other people who were making cameras were good because they were making electronic equipment. Kodak wasn't terribly good at making electronic equipment; we were good at coding things. So it wasn't terribly useful for us to try to compete with those guys, even though we did compete for many years successfully it was largely through outsourcing-clearly manufacturing-and then we outsourced design and then we outsourced everything... I saw a number of initiatives in the 90s on the output side of things-thermal printing, for example. Kodak is still doing it today. That's coding dyes on thin webs and that's what we did. Culturally, it fit very well and it was a digital product. We saw how we could make money with it because we sold stuff. By

making [digital] cameras we didn't sell anything because there was no film involved.

It's fascinating to hear all of this. I prepared a lot of questions, but you speak in such a wonderful way about the process of discovery and what it means to a broader cultural context. Following that line of thought, the entire idea of innovation follows the direction the culture is taking...

Yeah...

There seems to be no way for a single company today to dominate the entire chain of image production?

It's very hard. You see ... everybody loves innovation until it happens to them. Because innovation is very exciting when you are involved in it, but when it's happening to you; in other words when something's changing in your world you have to react to it. And there are all kind of pressures that modern companies face. Kodak faced them. As much as people say they are interested in new technology, you'll find that financial analysts are very conservative people. They would say: "This is really great but I wouldn't invest in it quite yet." When you need the money! (laughing) You see a lot of innovations coming from start-ups or really big corporations. You see the start-ups because there is nothing to lose and big corporations like Google because they have so much money they don't have to pay attention to all the naysayers. The other guys live on the edge of extinction and these guys live up here. That's how it is these days.

It seems that in the last five or ten years there has been a cultural emphasis on startups as the model for innovation. But this is a recent phenomenon. During the 70s when Kodak was at the top of the image production pyramid—as a young man with an amazing innovation in your hand—you were employed

within a giant corporation. It was a different world, wasn't it?

You see, there were many technologies that had developed, not only the CCD (Charge-Coupled Device): there was the Internet and others... the whole world changed. How do you react to these kinds of mega-shifts? I don't know if we are involved in these mega-shifts now. The big, tectonic shifts took place in the last twenty, thirty years when everything got digitized, which in my mind means time was done away with. Basically, digital means freezing time. You can take something that happens at the natural rate, you store it, compress it, and then you can burst it down to really narrow time, or you can extend it out to a really long time. It basically changed time and the way information can be stored and transmitted. That affected every business, not just the photographic business-it's the movie business, the music business, you name it... everything has been affected by it. A lot of developments are leveraging off these tectonic shifts and they are taking advantage of these new cracks involving information and the Big Data.

If you say "digital freezes time" does that mean we're living something that has already happened? Where do you see potential for discovery today?

This big shift enabled a whole bunch of new opportunities. When I think about digitization—when I first worked on the camera I had this thought and I found that it extends to what I see happening today: The whole reason why I digitized the signal when it came off the CCD was to freeze time. I couldn't deal with an analog signal because I would need a completely different recorder of some kind that had to work at a certain rate that would just be too hard to deal with in real time. And that's how I dealt with it. Any sane person taking output of the CCD in 1975 would have filtered and turned it into a continuous wave. I just took the samples that came out and turned them into numbers. I did that because it solved the problem for me. Time! Once I digitized the pictures. I stored them in memory and I could take my time and record on anything I wanted which was a very slow. magnetic tape. I could choose anything I wanted It eliminated the time constraint because I could only store the charge pattern for so many milliseconds before the thermal charges would build up. I had to get it off at a certain rate. Once I got if off and digitized it, time was no longer my enemy. That's it-I digitized it. But I wasn't thinking about the digital world or any of that; I was solving the problem and eliminating the time constraint. I find that done with a lot of technologies. The tectonic shift that has been enabled by digitization has allowed a whole bunch of new opportunities for people to build for each other. And that's why these developments happen rapidly but they're not really fundamental. Facebook is a big deal, but is it fundamental? Not really. It's a communication [tool] but it took advantage of the Internet and pictures you could digitize. It combined all the stuff that turned out to be useful for people. Twitter is the same.

Do you think that it produces a onedimensional quality of social relations? I don't refer here specifically to Facebook and I'm not asking you this only as the inventor of the first digital camera but as someone with a current advisory role within Kodak today. This may have broader cultural implications, so what does it mean for the future of human relations?

I know the question but...I don't know. People ask me just because I was involved in something that turned out to be a pretty good guess at things that I somehow have



Kodak (Made in France), 1961-2014 Kodak 6,25 mm tape sound recording packaging 62 x 42 x 4 cm good guesses now. I don't necessarily know that I do. I do think, though, it is affecting society and the fact that we are photographed everywhere means that we are better behaved, I guess—everything from traffic cams, etc. Our behavior somehow can be examined at some point, in which case we doublethink about what note we send to somebody or ...

It's like when you talk to one person, you in fact talk to so many others...

Yeah, you talk to everybody! It affects the way we change our behavior. Our social norms are affected by the fact that we can be judged by other people at different times and different locations, or rather immediately.

Then there is a question of photographic indexicality too?

And that's the other thing-what is truth? Obviously we have this in photography. What is a photograph? Is the photograph what appears on the image or what actually gets color balanced and changed before it gets recorded to the camera? Or what gets Photoshopped? Or when it gets cut down and re-done to make it fit the magazine page or make you look prettier? What is the photograph, right? What is truth? I think that the truth existed at some point when the light came through the lens but you froze time and now people can work on it. Photography evolves to the betterment or optimization of its use. But if you talk about truth (laughing)... somehow truth was left behind, to some extent, because it got optimized and turned into something that was more useful for somebody, but it wasn't necessarily the light pattern that you saw when you were there. And that's another aspect of the photographing world that we deal with and the challenges that archive this phase. Archivists deal with this--this is indeed a true picture and then you see that someone was

airbrushed out and one of the pyramids was reversed. National Geographic had a famous one where the pyramid was reversed or something like that. The problem is if you trust an organization to tell you something about the world and then you find out that one of their pictures has been re-done, they are not telling you the truth to the extent that it bothers you. It might not bother you if the model looks prettier or thinner but it may bother you if the person who was at the scene is no longer there. The truth was somehow affected by the time-line. (laughing)

So it seems like truth and fiction became blurred and it's hard to distinguish what's what?

It's what happens because the time is frozen. You can work on this picture. Now people can find uses for it, store it, use it for different purposes. You just wonder what is truth. You can be in a court of law-the chain of custody as they call it. You have to know exactly everything that happened to that piece of data and maybe there is good reason for that.

Another question: do you have an unrealized invention or unfinished project? Something that you wanted to do that wasn't completed ...?

Maybe personally. I'd love to play guitar better (both laughing). And my record collection is gone ...

It's been digitized? (both laughing)

Yeah, it happened! I just got rid of my old vinyl records, which I had for thirty years down in my basement—and my CDs too—I put them all on my iPod just because my wife got sick of basement being full of that stuff. I understand that some people are interested in this but I didn't see any need to keep it. There is only so much you could do...I don't know if I have any unrealized goals. Most of my goals are unrealized in terms of my understanding. I like to understand things better. It's funny how I found myself asking fundamental questions that I just assumed I knew the answer to. I find myself buying a book and reading about something that I think I understand and I take for granted, but really I don't understand. That's a kind of thing I do.

It's about creativity too.

I like to see stuff. You're an artist and you like to see stuff. You like to see something and then you like to take a physical embodiment of something. So you transfer to what you see in your brain to the world.

It's a materialization of a certain kind.

And realization too.

It's a process that leads you somewhere and you can't predict it entirely and that's how you hope to discover something that you don't actually know...

I'm asking you-and this is an interview and I shouldn't be asking you questions but... When you have something in your mind, a vision of what you want to project and then you go and try to turn it into a material object or a form of expression, are you happy with what you get?

If I say that I'm happy with the outcome of my work that would mean that I had somehow a preconceived idea of what I was supposed to reach.

Yes.

Sometimes I have an intuitive feeling and this leads me towards a certain kind of materialization.

What you're saying is that you start with a feeling and not a vision?

My art practice is conceptually based but I do need to have a certain type of emotional response to it. Otherwise I don't get fascinated by the subject in question.

So you have an emotional need or [must] express an emotion of some kind and then you turn it into some kind of material object and you hope that you expressed an emotion?

What is more important to me is that there is certain kind of tension happening in the process. Maybe it's to do with not being able to comprehend things that affect me. When I notice that what I had in mind when I started is occurring but there is always something else I could not foresee, that's when I get excited. So what I want to convey is a highly specific experience for a viewer. When I see it's there then I can stop. It's a process I need to go through and I can't say it's a predefined process. So yes, it's an intuitive process.

It's intuitive... The reason I ask this question is when you think of inventing something sometimes you may think you might get a certain thing but it's really this feeling you have about what you wanna try to accomplish. Sometimes you find yourself almost abandoning the end result because you really want to understand something. It's an emotional thing. I know I can build this thing, this gadget and it will do this but I really don't understand this thing. And then I dwell on that. That's what I find myself doing as I get older. I go back and dwell on some of the assumptions that I made that I could work with to turn into things. But do I really understand that? I get a tremendous emotional satisfaction out of finally understanding something-or seeing it. Sometimes I just find myself mesmerized reading about something; it could be about light and prisms; it could be almost anything. It comes to me as this concept and that makes me feel really good. I like to figure things out, but I want to know why it does what it does.

It's a creative act. You, as an engineer, might have that need to understand it as well. But I would say—from the position of an artist and someone who makes visual artworks and exhibits them for others to see—there is a fundamental link between different creative endeavors regardless of the particular medium.

Yes. I don't think you and I are that much different. I really don't.

You are just much smarter. (laughing)

No, no, no... I think I'm driven by my curiosity to go after certain assumptions about things. And sometimes late at night I would open up a book and dig into something that I should already know but somehow I feel that I don't. It's a feeling; not necessarily like I'm trying to build anything or write a paper. I just want to see it. It's a little bit what you may have when you start off on a project. I want to see it and to understand. But you project it to the world and I don't tell anybody I even did it. Not because I don't want anybody to know, it's just that's not why I do it!

You do it because you have an inner need. And there is a methodology that you follow ...

But you do the same thing. No need to admit it, but if you do an artwork to express that feeling and reach that point, does it really bother you if no one ever sees it?

I think it becomes alive in a different way when other people interact with it.

You get to see a reaction.

But that's not the main reason why I do it. I would do it anyway because I have a need to see it.

That's why I do what I do too. I would get the same reaction if I would explore a concept about something that I had a question about and I really understood. You know what I would love to do? I would love to teach it to somebody. If I could teach it to somebody to get their reaction it would be like you displaying your art. It's not that much different.

Fantastic.

You came to interview me and I now I interview you. (both laughing) I've talked to a lot of technical people and writers, but not many artists. That's why I was curious. You see the process of creating things is different, but it does start in your gut and it's an emotional thing.

It comes from inside but it's not particularly romantic.

Not at all.

It's an obsessive thing.

It's almost like you can't stop it. I find myself going through a book and sometimes asking: "Why am I doing this? Why am I doing this?" I don't know. I just do it. It's weird. (laughing)

Thanks so much for this.

Sure.

Mladen Bizumic met with Steve Sasson, the Kodak engineer who invented the first digital camera in 1975, on 16.04.2014 at the George Eastman House in Rochester, New York, USA. This interview transcript was edited for clarity and readability.



Kodak (Double Shell), 2004-2017 Chromogenic Print on Kodak Endura Matt, Kodak Endura Gloss, original Kodak Portra Professional 160 VC negative film 146 x 184 x 5 cm




















Change is Our Status Quo Fiona Liewehr in Conversation with Mladen Bizumic

Fiona Liewehr: We've been talking, discussing, and philosophizing about your Kodak project. These exciting conversations have been about the history of Kodak, social issues, the history of photography, questions about modernist, conceptual and contextual artistic practice, as well as the impact of digitalization, technology, globalization, economy and post-capitalism ... It's a complex project. So let's start at the beginning. How did it start?

Mladen Bizumic: That's a sincere introduction! A project as multifaceted as my Kodak one-which consists of six solo shows and has been presented over a period of three years with more than seventy individual pieces-is challenging to summarize in its complexity. That being said, there is an underlying structure to my approach-at least how I see it. To put it as simply as possible: it's all about the changing nature of photography. The digital shift-how photography today is made, transmitted, and received-has affected the way we work, socialize, and relate to each other.

That's true, and sometimes it's scary how quickly things change...

Boris Groys said, "Change is Our Status Quo." I'm aware that the digitalization of photography is a broad topic, but it's not an abstraction. Many other fields have been transformed by the mainstreaming of the digital too.

Questions about the reproducibility and distribution of images, about the massive modifications of our visual habits, the question of our perception of time and space, and finally about reality itself...Where does your original interest in photography come from?

Ever since I started being interested in art as a teenager, photography felt, paradoxically somehow, more immediate than painting. I guess it was somehow liberating because I didn't compare photography to other art forms. It was just this kind of interesting activity. At the age of fifteen I became more involved with photography and my favorite film was Kodak. While I tried shooting other films, such as Agfa in black-and-white and Fuji in color, Kodak was available everywhere in the '90s.

Not only in the '90s, Kodak was everywhere throughout the entire 20th century. What happened?

Things change ... Just think about it: in the year 2000, Kodak sold more rolls of film than ever before. In the year 2006, when the first iPhone was introduced, Kodak's sales of film started to drop 15-20% per year and soon after that I started to notice that some of my favorite Kodak films were discontinued. And then there was Kodak's Chapter 11 Bankruptcy and Reorganization, which was a huge shock! That was when I started working on my Kodak project. I was fascinated; how could such a legendary company fail?

What exactly fascinates you about it?

Well, I used Kodak films for many years and it just seemed like the end of an era. There is no photography without the industry of photography. I was interested in understanding what happens when a way of life that was taken for granted simply stops working. Nowadays we have these analog fragments, such as film from the past, but the superstructure that enabled them to function for more than one hundred years has been erased by the rise of Internet, smartphones, and the rest. The digital shift has brought with it a new social reality too. I started my inquiry into the conditions of this shift because there was a need to acknowledge, understand and create within these new modes of image techniques.





Where Instagram Lives (Key), 2016 Shredded chromogenic prints 102 x 72 x 3.5 cm

What do these new modes of production conditions mean from your point of view in today's art context?

These new digital production processes allow us to see, send, and disperse images instantly. But I still enjoy using analog. I acknowledge the existence of digital in my work but I focus on analog because it allows me to communicate at a different pace. It's not a nostalgic decision; with analog there is a temporal delay between the moment of photographing and the analysis of the picture. I find this useful: I shoot less but I always end up with more. I know it sounds paradoxical.

By the time I process film and see what I have, something completely unexpected might happen. Its like losing creative control and discovering something that is far from my original intention. It's a slower process too, and unfortunately also a lot more expensive. Regardless of these new or old production conditions, personally as an artist I think that photography is making something new, something that doesn't yet exist as an image. In my opinion, artistic imagination is always selective, and fragmented because the promise of photographic objectivity is nothing other than, at best, wishful thinking, and at worst, a travesty. I cherish this artistic freedom and take advantage of it. I don't intend to create photographs as a double of the world, or a shadow of reality, or an objective document, but as an affirmation.

What do you mean by an affirmation?

To affirm means to approve: to give shape to an invisible thought. Fernando Pessoa said, "An affirmation is so more true insofar the more contradiction involves." A work really starts to exist when the image becomes materialized and when it's seen, experienced, and shared. My work is informed by a tradition of conceptualism which questioned its own means of production, reception, and distribution. Also, I am interested in affirmative experiences of the here and now. We all know that our own experience of art differs dependent on the time of day, different lighting conditions, or personal insight or mood in which we see an artwork. The phenomenological aspect of photography is important. Yet, where the meaning of art is formed, which is of course a complex issue...

Right. Our reception conditions and possibilities, as well as our form of knowledge and memory, are changing. In which direction do you see photography going and how has the Internet influenced it?

It seems to me that with dissemination of images online the issue of where the meaning of art is formed is perhaps even more complex than with mechanical forms of reproduction. These days we more often discover exhibitions on our smartphones than actually visit physical galleries. László Moholy-Nagy predicted that the illiterate of the future would not be the person unable to read or write, but the person ignorant of how photography signifies. We should decide whether his prediction has been realized or not in the age of the Internet.

If there is such a thing as the future of photography it would be in working with cutting-edge technological innovation or re-discovering lost or unfinished photo experiments of the past. Photographers have always been technological innovators who experiment with making pictures, but they've also modified their devices or invented new photo processes to create images that would not be possible otherwise. More recently, these past experimental visual languages have been made available to almost everyone in the form of digital filters by iPhones or Instagram. Just think about it: cross-process, transfer, instant etc... this is actually a range of analog techniques!

Do you use them?

In the past I've cross-processed and transferred films. But why would I use any of these techniques on a digital device to mimic analog? It looks a kind of gimmicky.

You told me that all of your work created within your Kodak project is precisely about the shift between analog and digital. What exactly do you mean?

What I intended to achieve with my Kodak project is present a broad range of exhibitions that reveal photography as physical objects with a material history, social past, and specific narrative. While this could be said for most art. what I specifically tried to emphasize is how my understanding of art photography has been modified by the digital. A print on paper feels physically present and strangely precious in comparison with an image on a screen. It's not only a question of quality, or that film photography is intrinsically better or more permanent. What I tried to do with my exhibitions is set up installations that are always individual works plus their "X value." The X value stands for a number of contextual factors such as gallery location, architecture, display units, wallpaper, and pattern. My intention is to have constant tension between the works and their display, the individual elements and their surroundings.

Does this mean that this shift can only be experienced within a given context, within a given time, within a specific spatial situation? Or is it also addressed within a single work?

Obviously I try to do both: in the exhibition context and in individual artworks that are sometimes made to be shown on their own. About a year ago I started to include the film negatives in my artworks in order to reveal the "original" mode of production. There are no editions. I like paradoxes such as these, where arbitrary "rules" of the art market are turned on their head. I also know that it will be impossible to print some of these works in the future because the technology is always changing and some techniques will be obsolete. What is important is that I try to make a unique object, which is of course paradoxical considering the reproductive quality of the photographic image. By placing matt, gloss, or duratrans transparency photographs on top of each I present a range of photo papers with their own specific, subtle qualities. It's a physical object that can't be represented truthfully online or as a reproduction in a book. It makes the here and now of the viewing experience become the ultimate meaning of the work.

In this connection I'm interested in the artistic approach to the photo itself. What do you choose to focus on? How, then, is the act of photographing? How can I imagine the "photographer" Mladen Bizumic?

Well I don't make many photographs. I choose slowly and carefully what I photograph, print, mount and frame. There are more than enough images in the world and I don't want to add more to this overwhelming flow of image production. I don't "take a photo." I would say it's more precise to say that I construct a picture that is also a deliberate, physical object. The end result is an artwork where the elements of size, paper type, technique, mounting process, frame, and glass all function together. It seems to me that this is of a great importance for the experience I try to convey to the audience. I see a difference between "imaging" with my iPhone and making a photograph. Usually I see a location under particular lighting conditions that intrigues me. I snap an image with my iPhone and then I start planning to photograph the setting. In the past, before we had iPhones, I would just make a little sketch in



Where Instagram Lives (Magenta), 2016 Shredded chromogenic prints 102 x 72 x 3.5 cm



Where Instagram Lives (Cyan), 2016 Shredded chromogenic prints 102 x 72 x 3.5 cm my workbook and then I knew what I had to do. I want to make pictures that are highly specific. The scenes are often ordinary, but the way they are depicted, arranged, and constructed should ideally be particular. I don't want to make an image that reminds me of any other image and this I hope is achieved after the photograph is framed. I mentioned this because I consider the framing device to be an extension of the artwork itself.

I have never seen a portrait from you; your landscapes are unpopulated, your architectural photographs often show details that lie at the edge of our perception or convey a strange mood of a bygone era whose gaze is not at all transfigured but sometimes full of longing. They are images on which time seems to have stood still which speak of transience and at the same time of distant beauty. What is your relationship to the past and the transitory?

Photography offers an incredible range of aesthetic, sensory, and perceptual experiences. The subject matter of my photographs may vary but, if I have to generalize, these are images that depict a wide range of human constructions. For example, botanic gardens, bird sanctuaries or nature reserves are human "versions" of the natural universe. Take. for example, traces of the whalers' base in New Zealand or fragments of modern architecture in Vienna. I want to reveal fragility, failures, or precariousness as well as aspirations, dreams, and the hopes of human beings. For me, as an artist, photography is capable of revealing aspects of the social reality of our past and present, but it's also very capable of trickery, seduction, and corruption. It's meaningful to show that too. Recently I came across a word that was memorable, "nowstalgia": the yearning for something that is happening right now. How

strange to miss something that is already here! The most challenging thing for people nowadays seems to be constructing a vision of the future that is not dystopian.

The recently deceased English cultural scientist Mark Fisher has dealt with a similar question in his concept of hauntology. Why, at the beginning of the century, is the human so obsessed with the spirits of the past? Fisher assumes that, while the technological development of the Internet and communication devices is difficult to overstate, cultural progress has almost come to a standstill. The idea of the new-the belief in the future-in contrast to the Avantgarde of the 20th century, disappeared from contemporary thinking. His thesis, however, is not exhausted in the longing for a better future by invoking the spirits of the past, but rather his hauntology project attempts to save the lost future. It was clear to him, that only the one who desires the impossible can remain true to the utopian impulse.

I read Fisher and I agree that the term hauntology is also helpful to understand some aspects of my own practice. Hauntology is not about some kind of ghostly, nostalgic atmosphere; in fact it's based on the idea that our vision of the future has failed. It describes something about the current state of the neoliberal model. I'm also interested in those moments when we are reminded of our human dreams-achievements but also bankruptcies. That's something that a lot of my projects share, including the Kodak one: the issue of ruins on which we have to build something new. Social processes are incredibly complex and I'm not the right person to give an overview. As an artist, my real challenge is to focus on my surroundings and urgent cultural issues-to unpack and present their aesthetic material or, why not, utopian potentialities.



Kodak (Karl Marx Fountain), 2017 Chromogenic print on Kodak Endura Gloss and Metallic paper, original Kodak Portra Professional 160 VC negative film 102 x 102 x 4 cm



Kodak (Retina Type 117, Made in Germany, 1934), 2017 Shredded chromogenic prints 100 x 70 x 5 cm **Becky Allen** is a journalist who holds degrees in Environmental Science and Science Communication. She writes about environment, science, business and employment issues. Her writing has been published in *The Guardian*, *The Environmentalist*, and *Cambridge Alumni Magazine*, among many other journals. She has worked at The University of Cambridge and for The British Antarctic Survey and her past clients include the British Ecological Society, The Natural Environment Research Council, and The Royal Society of Chemistry. Adam Carr is a curator and writer, and Visual Arts Programme Curator for MOSTYN I Wales, based in Liverpool. He has curated over 50 exhibitions worldwide including Castello di Rivoli, Museum of Contemporary Art, Torino: Kadist Art Foundation, Paris; Nomas Foundation, Rome, T293, Naples; Sies + Höke, Düsseldorf; Johann König, Berlin. He has contributed to a large number of catalogues and monographs with essays which have been published by Whitechapel Gallery, London; Centre Pompidou, Paris; and Gamec, Bergamo. He also writes for a number of art magazines and publications, including Mousse magazine and Cura.

Fiona Liewehr is an art historian curator and writer based in Vienna who studied art history and economics in Vienna, Salzburg and Hamburg. She was an assistant curator at the Österreichische Galerie Belvedere: Head of Marketing and Communication at the MUMOK, Museum Moderner Kunst Stiftung Ludwig Wien: director of the Georg Karql Fine Arts and BOX until 2017 where she has curated group exhibitions such as This is Happening I & II, [scene missing], Cinematic Scope among others. In addition, she has organised solo exhibitions by Richard Artschwager, Mladen Bizumic, Carol Bove, Gerard Byrne, Carter, Andreas Fogarasi, Bernhard Leitner, David Malikovic, Jan Mancuska, among others. She is a co-founder of dreizehnterjanuar, a crossover platform between theatre, music, film and visual arts, and CINERAMA, an association supporting the cultural legacy of cinemas in Vienna

Stephen Zepke is an independent researcher living in Vienna. He is the author of Sublime Art: Towards an Aesthetics of the Future (EUP. 2017) and Art as Abstract Machine: Ontology and Aesthetics in Deleuze and Guattari (Routledge, 2005). He has co-edited Art History After Deleuze and Guattari (Leuven UP. 2017 - with Sjoerd van Tuinen). Deleuze and Contemporary Art (EUP. 2010) and Deleuze. Guattari and the Production of the New (Continuum, 2008 - both with Simon O'Sullivan). He is currently translating Anti-Electra; Totemism and Schizogamie by Elisabeth von Samsonow (Minnesota UP, 2017 - with Anita Fricek)

If not stated otherwise, all works are courtesy of the artist and Georg Kargl Fine Arts, Vienna

Cover:

Kodak (Reorganisation Plan), 2015 Exhibition view at Georg Kargl BOX, Vienna Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Offshore Haven, 2002-2016 Chromogenic print on Kodak Endura Metallic, Matt, Gloss, and Transparency Paper, original Kodak Portra Professional 160 VC negative film 80 x 222 cm Photo: Peter Paulhart Private Collection, Vienna

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Kodak (Light Leak Industry #1), 2004-2015 Chromogenic print on Kodak Endura Paper, original Kodak Portra Professional 160 VC negative film 100 x 70 x 4 cm Photo: Peter Paulhart Private Collection, Vienna

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Kodak (Light Leak Industry #2), 2004-2015 Chromogenic print on Kodak Endura Paper, original Kodak Portra Professional 160 VC negative film 100 x 70 x 4 cm Photo: Peter Paulhart

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Kodak Employed 140,000 People. Instagram 13, 2016 Exhibition view at MOSTYN I Wales Photo: Dewi Lloyd

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Kodak (Reorganisation Plan), 2015 Exhibition view at Georg Kargl BOX, Vienna. Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (la presence de l'image), 2014 Installation view at Galerie Frank Elbaz, Paris Photo: Zarko Vijatovic

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Kodak Employed 140,000 People. Instagram 13, 2016 Exhibition view at MOSTYN I Wales Photo: Dewi Lloyd

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United States Patent, 1978-2014 Chromogenic print on Fuji Archival Pape 42 x 32 x 3.5 cm Photo: Zarko Vijatovic

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Where Instagram Lives, 2016 Shredded chromogenic prints 4 parts, each 102 x 72 x 3.5 cm

Where Kodak Lives, 2016 35mm slides 20 parts, each 20 x 30cm Exhibition view at MOSTYN I Wales Photo: Dewi Lloyd

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Kodak (Presence), 2014 Sun-stained paper, Kodak Polaroid photograph 35.5 x 25.5 x 2.5 cm Photo: Zarko Vijatovic

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Kodak Employed 140,000 People. Instagram 13, 2016 Exhibition view at MOSTYN I Wales Photo: Dewi Lloyd

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Kodak (One Second After the Digital Turn), 2003-2016 Chromogenic print on Kodak Endura Matt, Kodak Endura Gloss, original 100T Kodak negative film 140 x 180 cm Exhibition view at MOSTYN I Wales Photo: Dewi Lloyd Collection Hainz, Vienna

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Kodak (Box), 2014 Chromogenic development prints 40 x 40 x 6 cm Photo: Zarko Vijatovic

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The Picture Made After the Last Picture, 2016 Chromogenic print on Kodak Endura Metallic Paper 107 x 137 x 4 cm Photo: Peter Paulhart

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Kodak Employed 140,000 People. Instagram 13, 2016 Exhibition view at MOSTYN I Wales Photo: Dewi Lloyd

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Kodak (Reorganisation Plan), 2015 Exhibition view at Georg Kargl BOX, Vienna Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Picture Material (Rochester, NY), 2008-2013 Shredded chromogenic prints 100 x 70 x 4 cm Installation view at Galerie Frank Elbaz, Paris Photo: Zarko Vijatovic Collection: George Eastman Museum, Rochester, New York

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Kodak (One and Three Images), 2015 Chromogenic print, USB stick, 35 mm slides, original 35 mm Kodak film Elitechrome 200 ED-3 10 parts, each 30 x 30 cm Photo: Peter Paulhart

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Kodak (George Eastman Stairway), 2014 Scratched postcard 31 x 21 x 1.5 cm Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (Body and Its Organs), 2014-2015 Disassembled Kodak Disc Camera 4000, plywood 82.5 x 62.5 x 3.5 cm Photo: Peter Paulhart Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (Reorganisation Plan), 2015 Exhibition view at Georg Kargl BOX, Vienna Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (Unidentified Photographer), 2015 Kodak Baby Brownie 1936, postcard of 3-year old George Eastman, plywood plinth 194 x 25 x 25 cm Photo: Matthias Bildstein Collection MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak Redistribution Centre (The Best Pictures in Town), 2005-2014 Paper-collage on gelatin silver photograph 79 x 79 x 4 cm Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (Thin Layers of Dignity), 2014 Chromogenic photograph, 35 mm slide element, Kodak sound recording 6.25 mm cardboard packaging 91 x 52.5 x 3.5 cm Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (Patent Network), 2014 Shredded C-photographs on Fuji Archival paper, Kodak sound recording 6.25 mm cardboard packaging, 35 mm film roll package lid 62.5 x 52.5 x 3.5 cm Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak / ZNTK (Bankruptcy & Reorganization), 2014 5 Epson Inkjet prints on ZNTK factory equipment Ioan forms, 2 plywood sheets 24.5 x 24.4 x 1.8 cm Photo: Matthias Bildstein Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak Substitute (Retina Automatic II, Made in West Germany, 1960), 2016 Carbonised camera, tripod dimensions variable Photo: Peter Paulhart

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Kodak (Thin Layers of Empathy), 2016 Chromogenic development print, postcard, Kodak sound recording 6.25 mm, 35 mm film roll package lid 91 x 52. 5 x 3.5 cm Photo: Peter Paulhart Private Collection, Vienna

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Uncle Bob under the Coca-Cola Kodak Sign, 1968-2014 Analog photograph, envelope, postal stamp 42.5 x 42.5 x 4 cm Photo: Zarko Vijatovic

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Kodak (George Eastman House), 2015 Scratched postcard 26 x 29 x 2 cm Photo: Peter Paulhart Private Collection, Innsbruck

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Kodak (Double-Sided Image), 2014 Chromogenic print on Kodak paper 52 x 62 x 3 cm Photo: Zarko Vijatovic

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Kodak (George Eastman Living Room), 2015 Scratched postcard 21 x 28 x 1,5 cm Photo: Peter Paulhart Private Collection, Vienna

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Kodak (Photo Confetti), 1975-2014 Photo proofs on Kodak papers, modified wooden box 41 x 30 x 3 cm Photo: Zarko Vijatovic

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Kodαk (Rolls), 2014 Rolled Kodak analog print, 35 mm photographic roll packaging 87,5 x 62,5 x 4 cm Photo: Zarko Vijatovic

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Kodak (Silent Partner), 1961-2015 Kodak 6.25 mm tape and sound recording packaging, Kodak 6.3 mm recording packaging 82.5 x 62 x 4 cm Photo: Peter Paulhart Private Collection, Vienna

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Picture Material (Tito, Jovanka, Nixon, Pat), 2014 Shredded chromogenic prints 42 x 32 x 3.5 cm Photo: Zarko Vijatovic

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Kodak (Made in France), 1961-2014 Kodak 6.25 mm tape sound recording packaging 62 x 42 x 4 cm Photo: Zarko Vijatovic Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Kodak (Double Shell), 2004-2017 Chromogenic print on Kodak Endura Matt, Kodak Endura Gloss, original Kodak Portra Professional 160 VC negative film 146 x 184 x 5 cm Photo: Christian Rupp

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Kodak (Substitute Retina Automatic II, Made in West Germany), 1960, 2016 Carbonized camera 11 x 16 x 8 cm Installation view at Sies + Höke, Düsseldorf Photo: Achim Kukulies

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Kodak (Inversion Guggenheim), 2013 22 x 42 x 2,5 cm Exhibition view at Galerie Karin Sachs, Munich Photo: Siegfried Wameser Collection: MUMOK Museum Moderner Kunst Stiftung Ludwig Vienna

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Sometimes Old Sometimes New, 1894-2014 Collage, vintage photographs of Stuttgart from the Moderne Neubauten aus Süd- und Mitteldeutschland architecture portfolio each 44 x 32 x 2 cm Exhibition view at Galerie Karin Sachs, Munich Photo: Siegfried Wameser

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Kodak (Proof Sheet Confetti), 2001-2013 Photo proofs on Kodak paper 35.5 x 26 x 1.5 cm Exhibition view at Galerie Karin Sachs, Munich Photo: Siegfried Wameser Private Collection, Los Angeles

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Kodak (Substitute Polaroid EK-160 EF), 2013 Carbonised camera 9,5 x 21 x 14 cm Photo: Siegfried Wameser Exhibition view at Galerie Karin Sachs, Munich

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Sometimes Old Sometimes New (Before Kodak Came to Stuttgart), 1894-2014 Collage, vintage photographs of Stuttgart from the Moderne Neubauten aus Süd- und Mitteldeutschland architecture portfolio, gelatin light filters 75 mm (blue, cyan, red) 3 parts, each 44 x 32 x 2 cm Exhibition view at Fotogalleriet, Oslo Photo: Istvan Virag

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Kodak (Unemployed Corner), 2015 Decommissioned ZNTK Factory Poznan equipment Ioan forms, postcard Dimensions variable Exhibition view at Porous Space, Vienna Photo: Alexander Wyatt Jackson

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Where Instagram Lives (Yellow), 2016 Shredded chromogenic prints 102 x 72 x 3,5 cm Photo: Matthias Bildstein

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Where Instagram Lives (Key), 2016 Shredded chromogenic prints 102 x 72 x 3,5 cm Photo: Matthias Bildstein

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Where Instagram Lives (Magenta), 2016 Shredded chromogenic prints 102 x 72 x 3,5 cm Photo: Matthias Bildstein

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Where Instagram Lives (Cyan), 2016 Shredded chromogenic prints 102 x 72 x 3,5 cm Photo: Matthias Bildstein

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Kodak (Karl Marx Fountain) 2017 Chromogenic print on Kodak Endura Gloss and Metallic paper, original Kodak Portra Professional 160 VC negative film 102 x 102 x 4 cm Photo: Christian Rupp

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Kodak (Retina Type 117, Made in Germany, 1934), 2017 Shredded chromogenic prints 100 x 70 x 5 cm Photo: Christian Rupp Collection: MAK - Österreichisches Museum für angewandte Kunst / Gegenwartskunst Vienna

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Kodak (Four Dimensional Community), 2001-2016 Chromogenic print on Kodak Endura Matt, Kodak Endura Gloss, original Kodak Portra Professional 160 VC negative film 75 x 222 x 5 cm Photo: Christian Rupp



Kodak (Four Dimensional Community), 2001-2016 Chromogenic print on Kodak Endura Matt, Kodak Endura Gloss, original Kodak Portra Professional 160 VC negative film 75 x 222 x 5 cm



Mladen Bizumic - Photo Boom Photo Bust

Editorial Director: Fiona Liewehr Art Direction / Design: Angelika Reichert Re-design: Bernhard Winkler Authors: Becky Allen, Mladen Bizumic, Adam Carr, Fiona Liewehr, Steve Sasson, Stephen Zepke Copy Editing: Scott Evans Printed in Europe © 2018 Mladen Bizumic, authors and photographers & Revolver Publishing, Berlin All rights reserved. No part of this book may be reproduced in any form without written permission from the publisher.

Photography credits:

Matthias Bildstein, Vienna; Achim Kukules, Dusseldorf; Dewi Lloyd, Llandudno; Peter Paulhart, Vienna; Christian Rupp, Vienna; Zarko Vijatovic, Paris; Istvan Virag, Oslo; Siegfried Wameser, Munich

Mladen Bizumic would like to acknowledge the help of the following people without which this project would never come to life:

Nuit Banai, Matthias Bildstein, Nada Bizumic, Peter Bizumic, Reinhard Braun, Adam Carr, Natasha Conland, Alfredo Cramerotti, Stephanie Damianitsch, Ramesch Daha, Rhana Devenport, Diedrich Diederichsen, Claudia Dohr. Rosi Eder, Frank Elbaz, Scott Evans, Heidi Fazekas, Andreas Fogarasi, Rainer Fuchs, Rob Gardiner, Sue Gardiner, Sophie Haaser, Benjamin Hirte, Friederike Hofmann, Lisa Hostetler, Mark Hughes, Dominika Karalaus, Achim Kukules, Georg Kargl, Felix Leutner, Fiona Liewehr, Dewi Lloyd, Robbie McMath, Maria Nardelli, Veronika Neubauer, Margit Neuhold, Simon Rees, Angelika Reichert, Peter Paulhart, Nenad Pljevaljcic, Christian Rupp, Steven Sasson, Michael Sprachmann, Stephanie von Spreter, Michael Stevenson, Michaela Stock, Christoph Thun-Hohenstein, Zarko Vijatovic, Bärbel Vischer, Dorota Walentynowicz, Marie-Jana Weh, Bernhard Winkler, Hans-Peter Wipplinger, Stephen Zepke, Pilar Zevallos, Dino Zrnec

Thank you.

Revolver Publishing Immanuelkirchstr. 12 D - 10405 Berlin Tel.: +49 (0)30 616 092 36 Fax: +49 (0)30 616 092 38 info@revolver-publishing.com www.revolver-publishing.com ISBN 978-3-95763-415-3



Mladen Bizumic is a Vienna based artist, born in 1976. whose work has been included in solo and group exhibition projects at the 10th Istanbul Biennial; 9th Lyon Biennale; 2nd Moscow Biennial; MAK - Österreichisches Museum für angewandte Kunst / Gegenwartskunst Vienna; MOSTYN, Wales; Zacheta National Museum, Warsaw: Ricard Foundation, Paris: Contemporary Art Centre, Vilnius; Govett-Brewster Art Gallery, New Plymouth; Adam Art Gallery, Wellington; ARTSPACE, Auckland, Among private and public collections, Bizumic's work has been collected by the MUMOK Museum Moderner Kunst Stiftung Ludwig, Vienna, Austria; George Eastman Museum, Rochester, New York, US: FRAC des Pays De La Loire, France: Chartwell Collection / Auckland Art Gallery, Auckland; Te Papa Tongarewa Museum of New Zealand, Wellington. Bizumic studied fine arts at the University of Auckland's Elam School of Fine Arts and art theory and cultural studies with Diedrich Diederichsen at the Academy of Fine Arts in Vienna. His work has been the subject of articles published in frieze, Artforum, Camera Austria, New Zealand Listener and many other publications. Bizumic is represented by Georg Kargl in Vienna.

