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Simplicity

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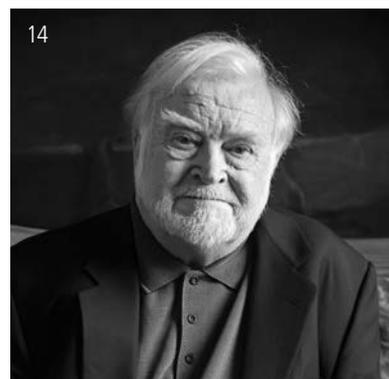
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Dear Readers,

“Simplify your life,” declared the Evangelical theologian Werner Tiki Küstenmacher some 20 years ago in a self-management book he’d helped to write – and the result was an international bestseller. The unbroken popularity of his guide for simplifying our everyday lives has seen innumerable imitators since, which suggests that we have a yearning to find simple solutions to our problems. But reality is complex, and it’s going to stay that way. In short: making things simple isn’t so simple after all.

This also applies to the British composer Rebecca Saunders, the subject of our cover story. She longs for a “New Simplicity” in music, but the concept is deceptive. In our Portrait, Jürgen Otten offers an impressive account of her difficult path to the heart of sound. According to the theories of the psychologist Mihaly Csikszentmihalyi, Saunders surely often gets “in the flow” when she’s composing. In our Interview with him, you can learn more about this state of being oblivious to the world.

The historian Heinrich August Winkler is concerned with more world-encompassing matters. In our Essay, he describes political populism from its beginnings down to the present day, and reveals the strategies of its “terrible simplifiers.” And in our Carte Blanche, Philipp Furler explains how we can already produce synthetic fuels from just air and sunlight, and how this simple idea can help to solve our climate problem in the near future.

Henry David Thoreau needed little more than air and sunlight when he withdrew into the woods in 1845. He documented his experiences of this simple existence in his book “Walden; or, Life in the Woods,” making him a forerunner of minimalist experts such as Küstenmacher and Co.

Reading, they say, is one of life’s simple pleasures. In this spirit, I wish you much pleasure with this issue of CREDO.



H.S.H. Prince Philipp von und zu Liechtenstein
Chairman LGT



In her bare, sparsely furnished studio, Rebecca Saunders is inspired by the sound of silence.

A black and white photograph of a desk. In the foreground, a stack of papers is visible. To the right, a modern, adjustable desk lamp with a polished metal finish is positioned. The lamp's shade is tilted downwards, reflecting the surrounding environment. The background is filled with more papers, some of which are pinned to a wall. The overall atmosphere is one of quiet concentration and creative work.

The simplicity of sound

Text: **Jürgen Otten**

Her music emerges out of meditative silence – or rends it asunder like a peal of thunder. The finely woven sounds, shimmering surfaces and aural sculptures of the composer Rebecca Saunders make her one of the outstanding representatives of the “New Simplicity” in music.



A white wall becomes sound: Rebecca Saunders and her music box installation "Myriad."

Music is hanging on the wall, heavy with pencil strokes, and silent. These are the sketches to a piano piece, and they are stuck in a line along the wall with adhesive putty as if they were on a clothesline. But these hieroglyphs bear a miracle within them: sound. And also a breathless, breathtaking silence. It's always both. Every sound ultimately emerges out of silence, and strives to return there. A sound has a duration; it cannot last an eternity. Like life itself. It culminates in silence and is extinguished there.

Rebecca Saunders, 52, comes from Britain, but has lived in Berlin since 1996. If you listen to her music, you almost always have a feeling of a deeply intimate relationship between these two opposites, sound and silence. They exist in a state of interdependence from which this composer generates the almost obsessive tension that is typical of her music and is full of surprises – such as in the above-mentioned piece with its sequence of sharp-edged, craggy crystals that will soon sound out from a grand piano. The listener has barely become accustomed to a fragment of the silence that surrounds them when they are abruptly torn from their state of near-meditative ease, to be struck by a lightning bolt or a thunderclap.

This seems consistent with the personality of the composer. She's sharp as a tack, incredibly quick in formulating her thoughts and developing her ideas, picking up outside stimuli, perceiving changes, and she also possesses the gift of being able to react to the slightest vibration in either the inside or the outside world. For example, the great Hungarian writer Imre Kertész wrote in his late diaries of the realization that "Only art that passes on wounds is worth anything." When asked if she agrees, Saunders ponders her answer for a brief moment of resounding silence before bubbling forth. Yes, she says, she believes that Kertész was right in this, because she too is fascinated as to what a wound is, a scar – above all, what resonance this scarred wound might have, and what makes up its interior and its exterior.

Beauty and brutality

She believes that all people have such wounds. After all, life itself is made up of ambivalent events, of beauty and brutality. "Everyone has their own tragedy. Or perhaps several of them. Everyone is alone and lonely." But she believes that the great philosopher Nietzsche was wrong when he wrote in his "Untimely Meditations" that we are strongest in our solitude. Ambivalence

is the basic prerequisite. It's our seed capital, for each and every one of us. It all depends on what we make of it. And in this context, we must surely regard Rebecca Saunders as a lucky person. Because she can do what she herself describes as "the most absurd thing in the world. I can compose!" But as she also admits, this does not mean that she is protected from all harm. "I suffer neither more nor less than every other human being."

To paraphrase her, albeit somewhat exaggeratedly: even artists who recognize a wound cannot close it. Saunders has a fundamental advantage: she can give expression to her feelings in music, which is the most "speechless" and yet also the most articulate of the arts. She has written numerous works that take up this topic of the fragility and vulnerability of existence, such as "Yes," which comprises 28 miniatures for soprano and instrumental ensemble – a kind of installational, scenic setting of Molly Bloom's monologue from the final chapter of James Joyce's experimental novel "Ulysses." Then there is "Scar," also for ensemble, which is about membranes between outer and inner worlds, about injuries, and about the question as to what might be the outer and inner impact of an event (whether positive or negative), and about what happens with the things that cannot be touched on in everyday life "because there is no space for it." For Saunders, this is a kind of basic principle in her composing: "It is an endeavor to maintain a protected space or to create it in the first place: a space in which wounds can be laid open."

Sources of inspiration

This principle is also evident in the space in which she works. It is a bare, sparsely furnished studio in a quiet side street in the Prenzlauer Berg district of Berlin. In the middle of the room is a desk with some 20 gnawed pencils, a modest lamp for reading and writing, and a pile of white paper. From the desk you can see outside, where a few trees stand. Saunders is old-fashioned in that she doesn't hold much store by computers in her work. "The pencil is more direct, more concentrated. It's also a haptic thing for me. I have to be responsible for everything, I have to know every rupture in the sound. You can't do that at your computer." If she is on a competition

jury and looks at a composition that's been submitted, she can quickly recognize whether the piece was written on paper or on a computer. "What's handwritten reveals something about us. That's why you have to be very humble." For her part, she seems to need the blank paper to take the next step – indeed, it's as if she needs it in order to think at all. And she needs her violin, which is slumbering in a case on a narrow shelf near the door, safe and sound. It's rarely played these days, but it's still there as a source of inspiration, perhaps even as a talisman, that's all that matters. Joyce's "Finnegan's Wake" lies there too – in English, of course – and she's read it more than once.

She reassures us by saying that, even in the original, you can only hope to understand half of this monstrous, surreal, crazily complex work. By comparison, even "Zettel's Traum" by Arno Schmidt seems like easy reading. This is typical of Rebecca Saunders – of both the woman and her music. She possesses modesty combined with immense discipline and a rigor of conception and structure. But more than this, she is driven by an unavoidable feeling of inadequacy – though in a dialectic sense. Failure, she says, is the basic prerequisite for being able to create something. "If you don't risk failure, nothing worthwhile can result." It is not by chance that her absolute favorite among authors is the great storyteller of negation and of a love that is both unfulfilled and brimming over: Samuel Beckett.



Rebecca Saunders develops and refines her compositional ideas in close collaboration with her musicians.



The semantics of sounds

Does art cleanse the wound that failure – life – creates? “No,” answers the composer as quick as a shot. That’s impossible, because there is too much ballast. But it’s not a bad question, she admits – because there is no answer to it. Neither in life nor in composing. This is precisely why she has to sit down anew at her desk every day to seek all the sounds that swirl around in her head – from diffuse sounds to concrete, shimmering sounds. She has to search for their semantics, for their algorithm, but also for their expressive options. Composing for Saunders is a work in progress, a kind of research, but above all an act of questioning that is constantly changing because it is dependent on experiences and outlines. It’s “a profound cognitive process,” she says. This fact is very important to her, because she’s utterly convinced that sounds and thoughts are linked together.

Now we come back to that white paper. At a first glance, of course, it’s just a pile of empty, blank sheets. But what is decisive for Saunders is that the paper to her is already saturated. “It’s already full before I put my pencil to it.” Just like the whole room is full, whose acoustic and whose concentrated bareness she loves (this is something that is essentially reflected in all her works, with their pure essence and their seductive coherence of sound and silence). This space already contains within it the sound that she is searching for. It is filled with it. Even the heating has a sound of its own, she says. Like every object.

Renunciation of opulence

The question is: does sound come from silence? Or does silence come from sound? Saunders thinks that’s an incredibly interesting question – one that probably no one can answer. This is because sound and silence each need the other from the outset; they are a perfect unity. “It’s fascinating to imagine that the blank paper already contains this unity, that the silence is already a kind of vibrant cacophony.” In this regard, she mentions the Austrian composer Anton von Webern, for whom she has high respect because his art of reduction produces a lyrical essence.

She is somewhat like Webern herself in her renunciation of opulence and in her insistence on another, quite possibly more objective form of beauty. This beauty is never romantic – Saunders will always repudiate this. Richard Wagner and Richard Strauss are no models for her (though she will allow for Brahms – albeit only for listening to). And yet the category of beauty also plays a role in her compositions. Not in matters of lofty form, but as a sound event in itself. “Sound is incredibly sensual and physical. And it’s ideal for formulating opposites – both choleric outbursts and warm sonic images.” The beautiful, she believes,

is not simply beautiful. It is the opposite of the brutal, which is far more visible. It’s hardly surprising that she loves storms.

And indeed, she seems to be a fearless woman – an artist who will not budge an inch if she does not know why she should, but at the same time an artist who finds new inspiration every day. Her path to success was a meandering one. Before beginning her studies in composition with Nigel Osborne at the University of Edinburgh, Saunders was a violinist – an instrument she had taken up under the influence of her highly musical parents.

A mental box of sounds

Her family home was full of music, she says – every day and every night, especially piano music. She soaked up these sounds when still a child, and made new sounds out of them: for the guitar, for the voice, for the recorder and for the piano. It was perfectly natural to create sounds herself. And she wasn’t concerned about whether they were old or new. She just wanted to make music. And music, she says, “is everything that can be heard – but it is also everything that can’t be heard.” The piano has a special place in this cosmos. Even today, she still really loves to write for the instrument. It’s almost as if such a wooden box of sounds were living somewhere in her head.

But that mental box of sounds isn’t making any more melodies. When Saunders came to Germany in the 1990s – at a time when she did not yet speak a word of this language that she still regards as highly complex – she made two categorical decisions. The first was: never to write a melody again! The second was: to shed the name she had used until then (“Beck”), and to take the one that was in her passport: Rebecca. For her, that made “a major difference.” It felt as if she had put on a new, second skin. On her DAAD scholarship in Karlsruhe, she had the good fortune of having Wolfgang Rihm as her teacher. Rihm never once told her *how* or *what* she should write, but instead freed her of the notion of what was right and wrong. She only got one great piece of advice from him at the start (though others followed later), and it was spot-on, she says. One day, she arrived at class full of jitters, bearing a densely written page of music. Her professor took it, had a long, hard look, and then asked her to come to class next time with only a single note of music.

The aura of words

Back then, she was a young, inexperienced scholar, hungry for knowledge. But she knew immediately what Rihm meant. A sound, like a word, doesn’t acquire significance when it is made up of many notes. It acquires significance when its texture is right. So she took his advice to heart, and maintains that it set

her completely free – both in her thinking and in her composing. She accordingly still speaks in the highest possible terms of her former composition professor: “Every student was different. That was what distinguished him. He did not teach, but put a space at our disposal in which a highly intelligent discourse could take place and in which every one of us could develop individually. He always spoke very carefully about what he saw. The way he spoke about composing resonated incredibly with me.” And this gave her the opportunity to penetrate to the heart of every sound and to use its energy potential. Even today, this remains the prerequisite of her composing: it is a search for the essence and the purity of a sound.

The musical means that Saunders uses in her effort to realize this “ideal” are rooted in the kind of thinking that unfolds in the literary works of Samuel Beckett. They are based on (supposed) uneventfulness; on a renunciation of narration (which, as the practiced dialectician Saunders knows, is truly the prerequisite for narration); on the notion of a saturated emptiness; on the timelessness of what has already happened, which is merely expanded by means of sound (and the sound of words); and on stasis (which is also the title of one of Saunders’ works, thereby transferring this state of being into sound). “Everything has already been said and done and thought. To find yourself in this saturated emptiness, and to articulate it, is what composing means to me.” This is also a reason why she would never write an opera on a topic by Beckett – though she has written a homage to the writer in “Skin,” for which she wrote the text herself. Her respect for him is otherwise too great: for Beckett’s marmoreal language, for the perfection with which he puts together his different components, and for the aura of his words. In this regard, she is at one with her teacher Wolfgang Rihm, who once said that music is itself already theater.

New Simplicity

This concept emerged in the 1970s, and describes a specific compositional approach within the New Music, though it is not associated with any concrete style, aesthetic trend or school. Despite its name, it is far from simple to define the New Simplicity precisely – not least because many of the composers who supposedly belong to it in fact refuse to be thus categorized. But usually, the New Simplicity is about allowing more subjectivity, emotions and expressiveness in music. Above all, it is an *idea* of composing that aims less to irritate the audience than to achieve a greater degree of comprehensibility.

A physical event

Only a virtual theater, of course. But one that can be fascinatingly different. You just have to hear a piece like “Void” by Saunders. It is as if you were going into a dark, empty room, into a museum of silence, in which rays of light fall from time to time, blinding the visitor and almost suggesting to them that they are in a kind of matrix. If you engage with this space and its atmosphere (for there is no other way to do it), then slowly but surely you lose a sense of having ground underneath your feet. You begin to float, between silence and the sound that unexpectedly penetrates through the outer walls; and in that same moment, you are completely submerged in this sound-space.

There is just one thing you have to endure in this space: solitude. Rebecca Saunders loves solitude. Her family is a source of absolute support to her, but if family commitments or other duties keep her away from composing for several days, she doesn’t feel good. She feels “terrible.” So she does it again and again. She goes to her white, empty space, briefly strokes her violin, casts a glance at her well-thumbed copy of “Finnegan’s Wake,” sits at the bare wooden desk in her studio, calmly sharpens her pencils, and lets herself be inspired by the sound of silence. Because the music is already there, somewhere around her, in her head. And even if it exists only fleetingly as a physical event, in the moment when you become aware of it, it is simply magical. And there are worse things you can say about music. ♦

 Audio samples of Rebecca Saunders’ music can be found at lgt.com/credo

Jürgen Otten studied school music, German and the piano. He has been active as a journalist and commentator since 1989. After working as a dramaturge for the spoken repertoire at the German National Theater in Weimar and as an opera dramaturge at the Kassel State Theater, he was appointed an editor of the international music theater magazine “Opernwelt,” and teaches dramaturgy at the Hanns Eisler University of Music in Berlin.



Rebecca Saunders

Born in London, Saunders studied the violin and composition at the University of Edinburgh. In the early 1990s she was awarded a scholarship of the German Academic Exchange Service (DAAD) that enabled her to study with Wolfgang Rihm at the University of Music in Karlsruhe. In 2001, she took her doctorate in composition, with Nigel Osborne as her supervisor. In 2018, the University of Huddersfield awarded her an honorary doctorate, and one year later she was awarded the Ernst von Siemens Music Prize, which is worth 250 000 euros. Saunders (52) today lives in Berlin. As composer-in-residence at this year's Lucerne Festival (August 14 to September 13), she will be represented by a series of works from the past ten years. Her concertos "Still" (for violin), "Alba" (for trumpet) and "Void" (for percussion duo) will be given their Swiss premières, while other works will be given their very first performances in Lucerne, including a piano concerto written for Nicolas Hodges.

For more information, go to
www.lucernefestival.ch

Violet on a mountain path

Text: **Eduard Klopfenstein** | Calligraphy: **Chikako Thomsen**

Is there anything in all literature that is simpler than the Japanese three-line poem that has achieved such broad currency under the designation “haiku”? It is regarded as the shortest verse form in the world. It has a tripartite form, but was originally written in a single line. Its content might be reduced to something minimalist in conception, but its brevity should not lead us to underestimate it. A haiku is not a haiku if it merely describes or observes. It has to possess a certain inner dynamic that is an active prompt to the reader’s imagination. It should also include a reference to the seasons, and this opens up yet another dimension.

The wanderer

The haiku translated here was written by the Japanese poet Matsuo Bashō in 1685. The violet in bloom indicates spring, which is the poem’s reference to the seasons. At first glance it is extremely simple. But we know that Bashō was originally unhappy with his opening verse, and so he later added the motif of the mountain path. This enables him to infer a relatively complex reaction: the lonely wanderer, tired by his long journey, enjoys a moment of openness and self-forgetfulness. When he suddenly discovers the little flower that is so unexpected here on the mountain road, he feels magically drawn to it. The external scene thus hints at an inner disposition and a receptivity to the discovery of something especially beautiful. In the haiku tradition, these verses have been much discussed and praised on account of the circumstances they depict. ♦

Eduard Klopfenstein, commentator and Professor Emeritus of Japanese Studies at the University of Zurich, was from 2002 to 2014 an editor at the *Japanese Literature Publishing Project*. He edits the “Japan-Edition” by Bebra-Verlag. In 2017, together with Masami Ono-Feller, he published the anthology “Haiku. Gedichte aus fünf Jahrhunderten” with Reclam (“Haiku. Poems from five centuries”). He has received many awards, including the *Order of the Rising Sun* (2010) and the “Paul Scheerbart Translating Prize” of the Heinrich Maria Ledig-Rowohlt Foundation (2019).

MATSUO BASHŌ (1644–1694)

On a mountain path
I saw something appealing:
a wild violet

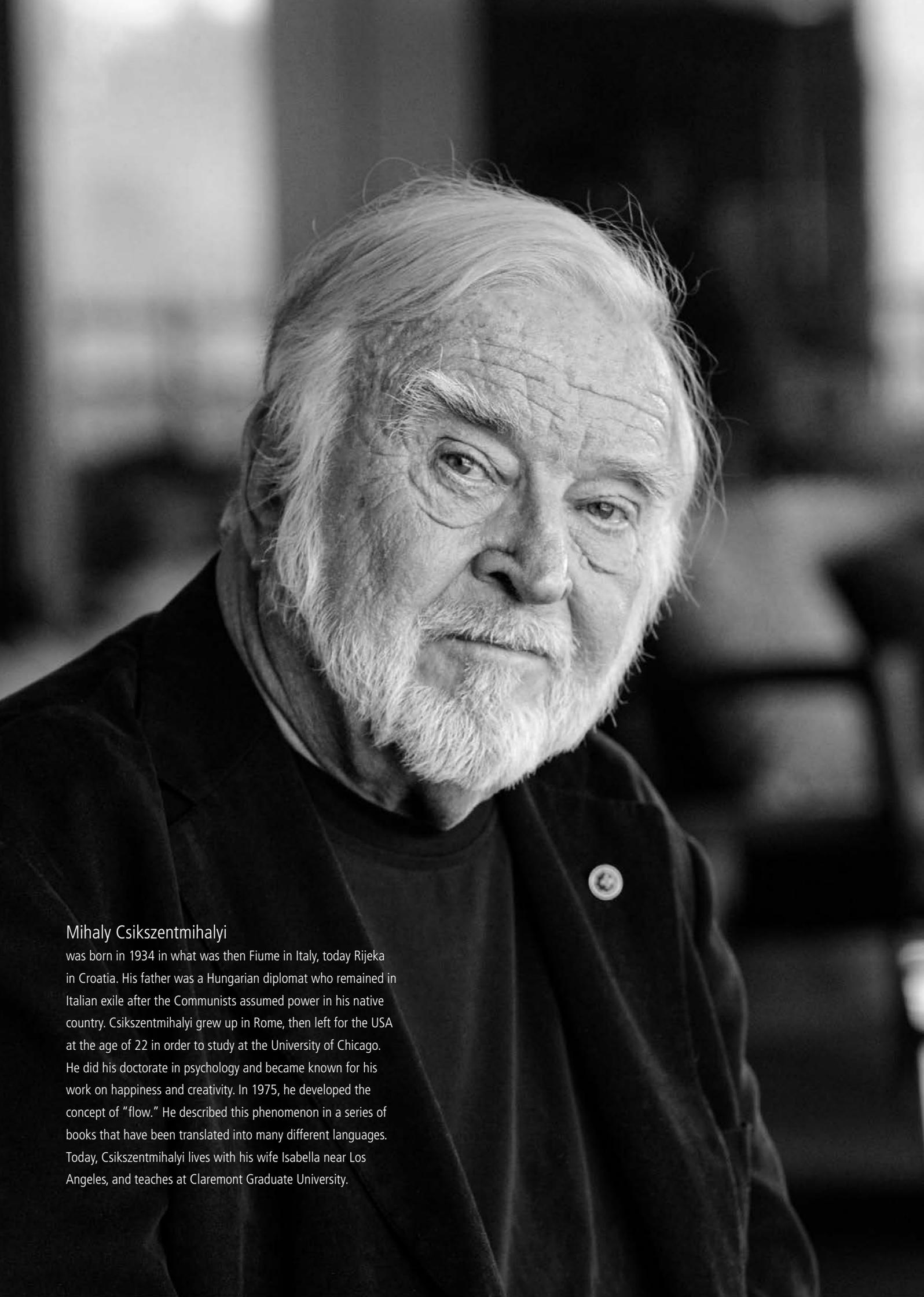
Yamaji kite / naniyara yukashi / sumiregusa

心 福 人

如 一 日 中 午

善 如 字





Mihaly Csikszentmihalyi

was born in 1934 in what was then Fiume in Italy, today Rijeka in Croatia. His father was a Hungarian diplomat who remained in Italian exile after the Communists assumed power in his native country. Csikszentmihalyi grew up in Rome, then left for the USA at the age of 22 in order to study at the University of Chicago. He did his doctorate in psychology and became known for his work on happiness and creativity. In 1975, he developed the concept of "flow." He described this phenomenon in a series of books that have been translated into many different languages. Today, Csikszentmihalyi lives with his wife Isabella near Los Angeles, and teaches at Claremont Graduate University.

“In flow there is no room for rumination”

Interview: **Christoph Drösser**

In psychology, the concept of “flow” is a state we attain when we enter completely into a challenging activity and forget everything else around us. It was coined by the Hungarian-American researcher Mihaly Csikszentmihalyi. In his house in Los Angeles, he spoke to us about the history behind his idea, and the role that simplicity and complexity play in it.

CREDO: Mr. Csikszentmihalyi, when and how did you come up with the concept of “flow”?

The idea must have come when I started rock climbing in Italy, before I emigrated to the United States. I did a lot of climbing in the Alps – in Switzerland, Austria and Italy. When I first came to the US, Chicago was completely flat. But then I discovered the Grand Tetons. In the summers, I used to take a train or a bus down to Colorado and Wyoming and do mountain climbing. I started writing about climbing in journals as an experience of sport, but also as a way of discovering myself and coming to terms with life.

Was it very important for you to give the phenomenon the name “flow”?

At first it was just a feeling. One day when I was swimming in a river up in Northern California, I thought: oh, that’s the feeling I get when I climb. And I ended up calling that the “flow” experience, it was a natural analogy.

How did you come up with a scientific concept for that experience?

At first I did interviews with people who did things similar to me – rock climbers, skiers, long-distance swimmers, marathon runners. I asked them how they feel, they told me stories, and I copied the stories down. After a while I interviewed some climbers who were poets. They said: climbing is like writing poetry. And I said, how come? I tried to classify these experiences, to analyze them and say, what is the important part? The word “flow” came out by trying to express the commonality of these various ways that people feel. And then I tried to develop ways

of measuring it, first by using questionnaires. They seemed inadequate because they were not very precise and were confused by issues of reconstruction and embellishment. How could I measure what people feel in the moment?

It sounds paradoxical – you want them to describe a situation that they really don't want to stop.

I started experimenting with high school children wearing electronic pagers. First they wore pagers that were programmed to go on at certain times of the day, but that was predictable and they would be prepared for it. So I had to make it random. Pagers had just come out and were pretty expensive. So I had to get research grants to cover the cost, and I came up with a study with workers, to find out when they felt exhausted, and how that influenced their life outside of work.

And what did they record with those pagers?

The date and time, of course; whether they were at work or at home. And then questions like: What were you thinking about? How happy were you? How much did you wish you were doing something else? And so forth. Generally, people were very conscientious in trying to answer them.

What did you find out with these thousands of data entries?

I knew from the interviews with the mountain climbers that they would say their best experiences are when they are doing their best, and feel they can do it well. So I knew that this balance between challenge and skill was a key element in the climbers' experience. And I wanted to know whether that was also true of normal people who have never climbed or even thought of climbing. And I found that surgeons report it when surgery goes well, and automobile assembly workers feel the same way when they feel their work is going well. So it's not just sports that causes it. It's a feeling that we get when we are operating at the limits of our ability in a demanding task.

I came up with eight combinations of challenge and skill based on these self-reports. For example, you are anxious when your

skill level is low and the challenge is high. You are in control when you're confident of your skills, but the challenge is average. And when you feel highly challenged but at the same time very confident, you're in the flow.

One explanation that you gave for why the flow state is so deeply satisfying is that your brain is fully challenged in these moments. You can't think of other things that might worry or distract you.

The human mind is programmed to turn to threats, to unfinished business, to failures and unfulfilled desires when it has nothing else more urgent to do, when our attention is left free to wander. Without a task to focus our attention, most of us find ourselves getting progressively depressed. In flow there is no room for such rumination.

Did you also demonstrate that with brain imaging experiments?

Oh yes. And those show very clear patterns. You can tell when a person is in flow by looking at a brain scan.

Let's talk about simplicity. Flow isn't simple, right? It has to do with complex tasks. Can you tell me what role simplicity and complexity play in the flow experience?

In a sense, flow is always about the reduction of difficulty, of obstacles. But that can get very complex. For instance, a surgeon

who removes an ulcer that is spreading in the body has a very difficult job. But the job is really to make this person like they were before, to make the organ work adequately. You have to do very difficult things to return the organism to a balanced state where it can work. The notion is to return things to an orderly state.

“It’s a feeling that we get when we are operating at the limits of our ability in a demanding task.”

So the activity is challenging and complex, but at the same time it feels simple and effortless?

It is effortless because you are doing things that are in your range of expertise. If you give a surgeon a person who is so mutilated that he can't live anymore, he will say: I had better let this person die. You have to have the expertise to judge what

the difficulty is. If you can cope with the difficulty, then that will produce flow. So a really good climber can tolerate more risk as he gets better. And at some point he has to stop. He has discovered where the limit is, and says: okay, climbing is boring now. Many of them can't do that, and then they get killed because they try to do things they can't do.

In one of your books, you illustrate the relationship between simplicity and complexity using the workings of a camera.

Think of how a photographic camera worked 50 years ago, when it was a simple machine with a lens and a shutter. If you wanted to use it indoors, you had to attach a flash to it; to shoot a distant object, a telephoto lens had to be added. The film had to be threaded by hand. In other words, that simple machine was very complicated to use. Now we have a complex machine that is very simple to use: all the functions of the flash, the telephoto, the light meter, and so on, have been built into the camera; the photographer has but to aim and shoot. In the same way, the more complex your skills get, the more simple the outcome may look.

Tell us about some of the characteristics of a state of flow.

The main characteristic is that you want to do what you are doing so much, you forget everything else. You forget you're hungry, you forget you have to go to work in an hour. It happens when you are gardening, when you are reading, some people get it from work, some people get it from their family life, some people get it more from leisure activities. But there are clear patterns by age, by gender, by education, by occupation. If I look at one of these self-reports, I can generally guess fairly correctly what kind of person made it.

Some of the descriptions look a little paradoxical at first sight. One is the question of control. Some people say they feel like they are fully in control, and some people say it's not me that's doing this, it was an external force controlling me. How can you reconcile that?

Usually, people feel in control when they are in the flow, but not too much, because if you feel that you are too much in control, you're bored. There are moments in flow activities like climbing when control is low, but there are very few moments that are out of control. Otherwise you don't stay alive long.

Another paradox is how time feels. Some people say time flies, and others say it stands still.

Few people say that time stands still: they say that they are not aware of time. Time doesn't exist for them. In other words, rather than having to chase the clock, we come to learn that we ourselves control the subjective experience of the passage of time.

In a book, you told a story about your half-brother Moricz who collected minerals.

The last time I saw him, he showed me a rock from his collection and told me that he was looking at it a few days earlier. He started examining it at nine in the morning, it was sunny outside. At some point he looked up, he thought a storm was coming – but then he realized that the sun was setting, it was seven in the evening.

“Flow is about the reduction of difficulty.”

Some people say: “It's flowing through me.” It's like the universe is taking control. You talk about the loss of ego, which makes it an experience that is very close to something spiritual or religious. People talk about sensing a higher purpose, feeling part of something bigger.

For some people it is a religious experience, some people are just surprised by it. They say: it's very strange, I didn't feel I had to prove myself. I felt at one with Nature, I felt at one with my family.

Is it easier for people with religious beliefs to get into this state?

It's easier to have that experience when it's connected to something transcendent, something beyond the self. Other people may experience it just as easily, but they think it's something happening in their brain and they don't know what it is.

Let's imagine two rock climbers: one is very religious, the other is very rational. Is it harder for the rational person to get into a state of flow?

The rational person will describe it like this: I felt really strange and good. I didn't feel constrained in my body. And the religious person will maybe say: I felt closer to God. Almost all of the world's religions have discovered their own version of flow, and tried to make it part of their practice. This can be through ritual, through prayer, or methods of inner discipline.

Let's talk about work and business. I can imagine people experiencing flow in creative jobs, when they're managers of a company, or if they are artists or athletes. But what about people in very ordinary jobs? Jobs that people might have picked not because they liked them, but because they need to feed their families?

As I said before, the first work we did with pagers was with factory workers who were putting together machinery. It was very dirty, dangerous work. But they can experience flow too. I worked with people who prepared food for airlines. And I compared traditional farmers with modernized farmers.

Who was happier?

The traditional farmers were happier and more often in flow at work. The modernized farmers who use more equipment were much less happy.

But what's the solution? We can't go back to farming like we did 500 years ago.

No. Either you change the work, or you give them more leisure time. And what we choose to do is give leisure.

But we still have to spend 40 hours a week at work.

What can a company do to make the situation better for its employees?

We found that the same things that provide flow in leisure tend to give flow at work. It's about finding the right balance between a challenge and your skills. You get clear feedback on what you are doing. You know why you're doing it. The goals are clear, and you get a good feeling that you know what you're doing. These are the key elements. The rest comes with it.

You say that even people in highly adverse situations can experience flow, like refugees or people in prison camps.

Yes. For example, inmates even found meaningful work in some concentration camps. If they were good at doing things with iron implements, they got work as iron mongers and could do things for the camp. If they could work with wood, they could start making furniture. Anything that allows you to express your skills makes you feel better, even in such a camp. The worst off were people like Talmudic scholars who didn't have anything to read, or brain surgeons who could no longer remember how to cure a sore throat.



He believes that an excessive concern for material possessions is unhealthy: Mihaly Csikszentmihalyi.

You wrote in one of your books: "If everyone were genuinely happy, there would be no need for business any longer."

Are you propagating a simple life, with no need for material things?

It is generally agreed that the best indication of whether a person is happy is that he or she no longer desires anything else. But it's not that materialism in itself is bad. Up to a certain point, owning and using artifacts does make us happier. Everyone is a materialist to some extent, and if we weren't, we wouldn't be human. But research suggests that an excessive concern for material possessions is unhealthy.

You describe the individual development of a person as a path from a simple to an increasingly complex personality. However, you also write that some people never get past the age of the "terrible twos," when they want everything



to go their way. “Their self-centeredness and impulsivity usually mark them in the eyes of the majority as immature sociopaths.”

Yes, and sometimes those people are leaders or CEOs. They may even attract admiration with a self-assurance that resembles charisma. But if a firm is going to do well in business, it should be in a position where everyone is encouraged to progress toward complexity.

Can everybody find an activity that is good for them, and puts them in a flow state?

Yes, but many people don't realize what their skills are until late in life. And they say: my gosh, I spent 60 years doing something I didn't like – and only now I've found out what I really like. I like repairing old rugs, I like polishing silver, I like to read poetry – I never knew that.

So what is it for you now? You don't climb anymore, I guess.

I don't climb anymore. I used to like playing soccer, but I don't do that anymore either, at 85 years of age. Writing can be very enjoyable. Working with students can be very enjoyable. Seeing them suddenly light up and say “yeah, maybe I could do that” – that kind of thing is constructive, productive and makes me feel good. And so is all the time I can spend with my family. ♦

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The dream of simple money

Text: **Gerald Drissner** | Photos: **Raphael Zubler**

Five students from Sardinia were determined not to accept the fact that businesses on their island were going bankrupt. So they created their own currency – the Sardex. It's based on the simplest possible rules, and it's helped a lot of people to emerge from the financial crisis.

Giuseppe Littera, co-founder of Sardex, here standing on a nuraghe. Thousands of these stone towers were erected on the island of Sardinia over 3000 years ago.





In the light of an October sunset, Giuseppe Littera climbs up a stone tower that used to be part of a mysterious system, some 3000 years ago. These cone-shaped structures look like giant beehives, and thousands of them were erected all over Sardinia, just like here in Mogoro, a village in the south of the island. Scientists know little about these so-called nuraghi, so it's not surprising that the locals have come up with their own ideas as to what their purpose might have been. Were they defensive towers, houses, or even places of worship whose locations were dictated by the stars?

"Every tower offers you a view of the next one," explains Giuseppe Littera enthusiastically. He's 39 years old and speaks quickly – and when you see his wiry frame, you wonder how he ever managed to eat all the food that his Sardinian mother cooked for him. He tells us about grave finds that suggest there were no elites during the heyday of the nuraghi, from roughly 1600 to 500 BC. Water sources were apparently on neutral ground and thus a public commodity. He once read in a scholarly article that people back then wanted to avoid surpluses, so if these did occur, then they probably organized big public festivals to consume them. When something was produced in greater quantities than was needed, it was returned to the people. "We have to regain some of this spirit," says Littera.

There is a special gift in being able to discern an aspect of things that others maybe can't see. When this gift is informed by what people have learned and experienced, it can lead to new ideas – and often also to simple solutions for complex problems. Where others might see just an ancient heap of stones, Giuseppe Littera sees a peer-to-peer network, a form of communication among equals. A kind of Internet before the Internet. He sees before his mind's eye the model of a cooperative society that had goals other than merely maximizing profits. Littera says that all this was an "inspiration" that left its mark on the Sardex – the currency that he and his friends have developed in Sardinia, and that starts where our complicated financial system fails.

How does money really work?

14 years earlier, 1100 miles to the north, in Leeds in Great Britain, Giuseppe Littera was busy studying modern languages.



The builders of the nuraghi followed the simple rules of a cooperative society. Giuseppe Littera and his friends were inspired by them when they designed the Sardex.

He shared his apartment with an old friend, Piero. Suddenly, he heard Piero cry out. He rushed over to him. “You have to look at this stuff,” said Piero, who was sitting at his computer. “I thought something had happened to you,” said Giuseppe. “No, you don’t understand,” said Piero in a fluster. “Bad things are going to happen.”

Together, they watched the three-and-a-half hour documentary “The Money Masters” from the year 1996, which was highly praised by some, but denounced as conspiracy theories by others. It explains why we use money and how it works. The movie awakened their interest in getting to grips with a new subject in the coming years: economic theory.

Up to then, they thought of money as just something that you used to pay for food and the rent. But now they learned that money had long become a commodity that you can use to make more money. They came across acronyms such as CDO, CDS, CFD and MBS, behind which lay highly complicated financial instruments. And they learned how leveraging works in derivatives trading. In their leisure time the two friends talked intensively about money. They read the classical economists from David Hume to John Maynard Keynes, Knut Wicksell, Friedrich August von Hayek and Milton Friedman, and they wanted to know what the Greeks and the Church thought about money. They also investigated the complementary currencies that were founded using the ideas of Silvio Gesell, a Prussian maverick thinker of the 19th century.

Gesell condemned the hoarding of money and wanted to return it to its original function: as a means of exchange. He wanted “to drown interest in a sea of capital.” Whoever saves money ought to be punished with a monthly deduction, he believed. This would motivate people to spend quickly what they had saved. It would stimulate demand and make capital permanently available. He wanted to achieve this by means of a parallel currency called “Freigeld” (literally: “free money”) that was based on an idea that he called “the golden rule of economics,” namely: “Buy your products from each other.” The mayor of Wörgl in Austria put Gesell’s idea into practice back in 1932, and within a year, unemployment had dropped by 25 percent in his town, whereas it had increased by 20 percent across the rest of Austria. There were many attempts in Europe back then to combat the economic crisis with regional currencies. In Switzerland, for example, the “WIR” was created in 1934 as a parallel currency to the Swiss franc, and it still exists today (though it has since decreased in importance).



Giuseppe Littera: “We’ve brought together people who used to work against each other. And now they cooperate.”

Of rich and poor

Giuseppe Littera grew up in the village of Serramanna in southern Sardinia. It is the second-largest island in the Mediterranean, and home to 1.6 million people and 3 million sheep. The English writer D. H. Lawrence once described it as “lost between Europe and Africa,” and it indeed lies roughly equidistant from the Italian mainland and Tunisia – some 120 miles in each case. It has only belonged to Italy since 1861, when the whole country was united under one king. The Sardinians speak their own language, and never tire of insisting that their capital, Cagliari, is older than Rome, the supposedly Eternal City.

In the late 1950s, a banker from London had a business idea that would change the island for good. He wanted to turn the north of it into a stomping ground for the jet set, and was able to get rich investors enthusiastic about it too, namely Patrick Guinness, the Irish beer brewer; Giuseppe Kerry Mentasti, the heir to San Pellegrino; and the then 20-year-old Karim Aga Khan, the religious leader of the Nizari Ismaili community and a multibillionaire. Together, they bought up 35 miles of coast-

line from the local shepherds for a song and created the Costa Smeralda, now a picture-postcard spot in Sardinia with stylish villas, yachts and an emerald-green sea.

Most of the island's population lives in the south, but that part of Sardinia endured a very different fate at the time. NATO had made itself at home there, and began testing new combat agents that led to malformed sheep and cases of leukemia. And the government in Rome built petrochemical factories to create jobs – though today, only ruins remain of them.

Outside the system

Carlo Frau is a 56-year-old farmer in Siliqua, where he cultivates some 350 acres of land and keeps 1000 sheep and 200 goats. In his white-tiled cold storage room, he stores hard cheese worth some 150 000 euros. The rind is edible, he says, because he treats it with olive oil. He is the son of a shepherd, and he can still remember how his parents' home never smelled of food, but of cheese and farm animals. He grew up in Nuoro, a rough area where bandits used to kidnap rich people and drag them off to the mountains. One of their most prominent victims was the singer-songwriter Fabrizio De André, who to the astonishment of many Italians declared his solidarity with his kidnappers after being freed.

“When I was little, the wages of a policeman were worth the meat of two lambs,” he recalls. “Today it's 200! To be a farmer means a life of sacrifice and hardship.” All the same, business is good for him, because he can sell his products in the region and can thus remain “outside the system.” The system? “Yes,” he says, “the EU, the banks, the euro, the government, all these crazy rules that no one understands anymore.”

The price of sheep's milk is perhaps the most important political topic on the island. The farmers are powerless, because they're lone fighters in a battle against the dairy and cheese factories. When the price sank to 2.2 euros per gallon in February 2019, protests broke out. Armed men stopped a dairy truck and forced the driver to dump the milk while they filmed it. But it naturally didn't help much.

The province of Medio Campidano, as this region was once known, has been the poorest in Italy for decades, as measured by value added per capita. It was in this area in southern Sardinia that Giuseppe Littera grew up, too. He returned there just a few months before the investment bank Lehman Brothers declared insolvency in the early morning of September 15, 2008.



A club for the Sardex

The shock waves from the financial crisis soon reached Sardinia. The Italian banks were fighting for survival and were not granting any more loans. Businesses could not invest and were not taking on any more staff. Those who were young enough did their best to leave the island.

“Our worst fears became reality,” recalls Littera. Together with four friends, he decided to do something about it. They were constantly hearing the same story over and over again – like the restaurant owner who wanted to expand but couldn't get a loan from the bank, so wasn't able to employ the carpenter who actually had the time and the capacity to do the job. “We kept coming to the same conclusion: there is too little money in the system.”

But what if the restaurant owner could pay the carpenter with future meals? What if the business between the two of them could be organized with a new instrument? With the Sardex?



The low price of milk is causing problems for Carlo Frau, a farmer. But he is still doing well, because he sells most of his products locally.

The five friends turned this idea into a kind of club in which the participating businesses offer each other interest-free credit. They don't do it in euros, but in Sardex, which is a digital parallel currency. It is worth the same as the euro, but cannot be exchanged. So whoever wants to get rid of their funds in Sardex has to spend them locally by buying something from other club members. As a result, regional demand increases. Anyone producing goods or services can join if they are willing to pay an annual fee that today lies mostly between 800 and 1000 euros. In return, they receive an initial credit balance – a kind of credit framework, which is on average two percent of annual sales.

Aliens in the finance business

The makeshift Sardex office was set up in the house of Littera's grandmother. The five friends bought a fax machine and used it to make their first transactions. It did not take long for the Italian financial police, the Guardia di Finanza, to get suspicious and come calling on the grandmother. "So where's the cash?" they asked. Shortly afterwards, while they were still interro-

gating their suspects on the spot, three sheets of paper oozed out of the fax machine – invoices from a buyer and a seller and a declaration signed by both. The officers could not believe their eyes: "People are willingly sending you their invoices?" In a country in which tax evasion is the "mother of all problems," as Italian Prime Minister Giuseppe Conte once put it, the men from the financial police were astonished. Then they left, recalls Littera. "They probably thought we were aliens."

Antonello Muru, 52, runs a butcher's shop in Iglesias, a little town that used to make a good living from mining. But today, you see the same sign everywhere: "Apartment for sale." As Muru recalls, "We used to have three hospitals here. But today? Just one, and it's not even any good!" Many of his customers pay for some of their purchases with Sardex; with this, he in turn buys paper for wrapping up the meat; he also uses it to buy wine and to pay the car mechanic. "You have to be in it with heart and mind," he says. To be sure, he often has to drive a long way to find businesses willing to accept Sardex. But they're a community.



The butcher Antonello Muru gets new customers thanks to the Sardex, and has become part of an economic loop: "You have to be able to dispose of the Sardex you earn. That is only possible if you buy things from others."

"Once, a man from Cagliari called me up and wanted to buy over 60 pounds of meat," he says. "He had to drive 20 minutes here by car." Today, that man is one of his regular customers.

The Sardex people know exactly what the problem is, insists the butcher. "If someone calls up a bank, they often don't even pick up the phone. And if someone does answer, then they want papers you can't even get." Every Sardex member, however, is assigned a broker who takes on several jobs, calculating investments and offering credit. But most of all, he helps those who've gone into the red by bringing them together with possible buyers with a high credit balance. Muru recently bought solar panels worth 10 000 euros using Sardex. "I called my broker. I explained what I wanted to do, and a few minutes later I had the money."

From the idea to a hip start-up

Sardex has long become a hip start-up company. Today it employs 52 people and is located in a two-story building in Serramanna. 4700 businesses have joined, and in 2018 it had a trading volume

of 43 million euros. A Dutch company did the programming for its IT platform, and there's a smartphone app and plug-ins for Internet shops.

Giuseppe Littera's office is on the upper floor. It's big enough for three whiteboards, a large desk and a bookshelf. The last of these holds books on quantum mechanics, analytical geometry and the history of money. "People often told us: Sardex only works because people in Sardinia are fifty years behind the times," he says. But that just annoys him: "I've got a fiber-optic connection here, and I speak four languages!"

The strength of Sardex is that it's given people the feeling that they have things under control again. "We are obsessed by competing with each other," he says, "but we've brought together people who used to work against each other. And now they cooperate." Sardex is a closed system, so risks and rewards stay in the network. "To many economists, that's really peculiar. It's not the usual way that banks work today."

Money doesn't die

Paolo Dini is a researcher at the London School of Economics who has been looking intensively at this “robust mutual credit system,” as he calls Sardex. He believes that the idea of replacing imports with local purchases can be a sustainable strategy for weaker regions. In 2018, the Sardex reached 0.5 percent of the trading volume of the whole private sector of Sardinia. That could be brought up to 5 percent if the Sardex began to be used in other regions of Italy. “Even that may not seem like much,” says Dini. But for small businesses it can have a palpable impact on the job security of employees. One indicator for the success of the Sardex is its velocity of circulation. This number says how often the money supply of an economy is turned over within a year. In its best year, the Sardex changed hands on average 12 times; in 2018 it was 4.8 times – whereas the euro changed hands just once in that time. “This also shows that Sardex is completely isolated from the euro system,” says Dini.

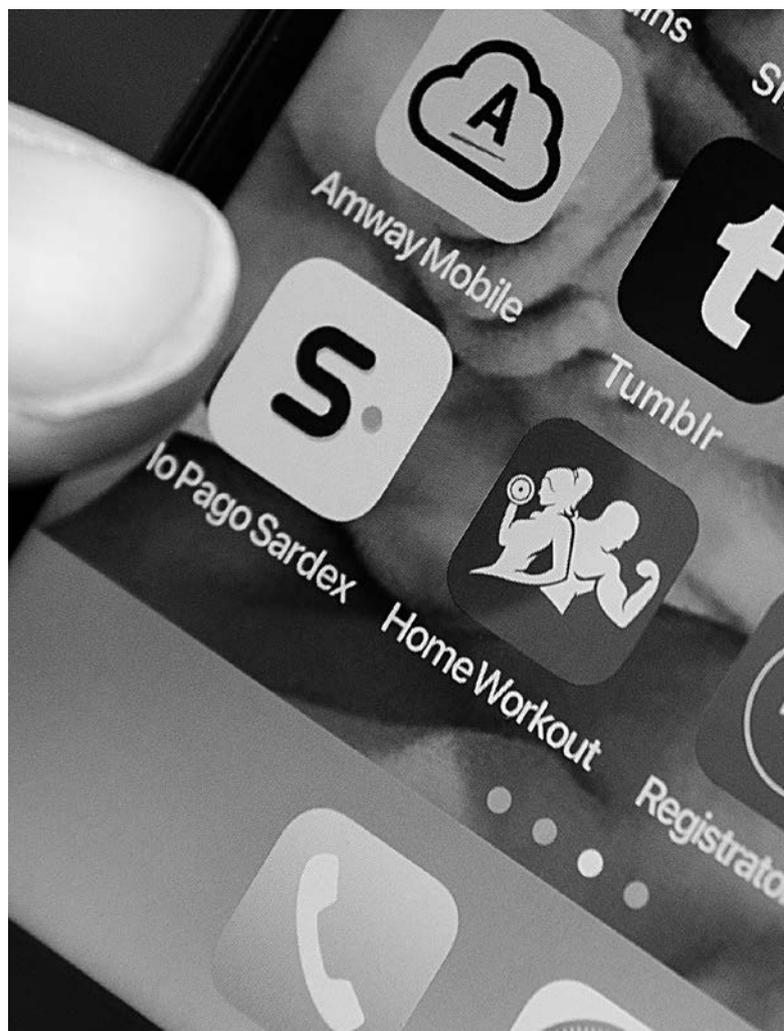
Giuseppe Littera has thought a lot about the influence that our money system has on people. On this October evening in Mogoro, on the 3000-year-old stone tower, he tells us how he imagines a future economic order. He is convinced that we will have to bring the economy and ecology into harmony with each other if we are going to survive in the long term.

“Does biology have an interest rate?” he asks, and gives the answer himself: “I don't think so! Interest was invented by us and is not compatible with life on Earth.” He believes that we have just convinced ourselves that growth is a logical opportunity for shaping our economy and our lives.

“We are all going to die sometime,” says Littera. “But money doesn't die.” Money simply keeps growing in our system. Nevertheless, we still want to have both: stability and growth. “For me, that's an oxymoron,” says the former linguist. “They are two mutually exclusive concepts.” ♦

▶ You can find a video about this Report at lgt.com/credo

Gerald Drissner is an Austrian economics graduate who researches into the history of his subject. His reports and analyses have been published in the “Berliner Tagesspiegel,” the “Neue Zürcher Zeitung am Sonntag,” and in the magazines “Stern” and “profil,” and have won several prizes including the renowned Axel Springer Award.



Sardex

Sardex is an abbreviation for “Sardinian Exchange Network.” It is a complementary currency that is used in Sardinia alongside the euro. It is intended to strengthen local purchasing power. In practical terms, Sardex functions like a club in which businesses offer each other interest-free credit, measured in the unit of Sardex. A Sardex is worth the same as a euro. But these units don't exist on paper, only digitally. They neither earn interest, nor can they be exchanged.

Founded: 2009

Participating businesses: 4700

Employees: 52

Credit volume in euros (2018): 95 million euros

Velocity of circulation (2018): 4.8

For more information, go to: www.sardex.net



Photographic precision

Ferdinand Küss (1800–1886), detail from “Still life with roses and apricots,” late 1840s. © LIECHTENSTEIN: The Princely Collections, Vaduz–Vienna

Ferdinand Küss? Has anyone heard of this painter today, outside of a few proven experts in still lifes and the flower paintings of the late Biedermeier? And yet he was responsible for one of the most fascinating paintings in the Princely Collections. It was only acquired in 2010. But you can't overlook it: what captivates you about it from your very first glance is the simplicity – one might also say the naivety – with which Küss brings together its individual elements into an artwork that seems to reject any notion of intellectual discourse.

Küss was trained at the “Wiener Akademie” (Viennese Academy) by its professor of flower painting, Sebastian Wegmayr, and he became known for his detailed studies of blossoms, fruit and leaves. He unites all these elements here with an unsurpassable degree of realism. It is a realism that seems to overcome reality itself, elevating the ideal world of the Biedermeier into a new, wholly different realm with its otherwise banal views of a wall, a window, roses, apricots and even a wasp that sits before the observer as an apparent matter of course.

It was the most prosperous social strata who determined the mainstream in the art world of early 19th-century Vienna – the rich intellectual aristocracy and the enlightened bourgeoisie. The Biedermeier opened up to them a whole cosmos of simple things, and this is reflected by Küss in his painting. Here, we find that simplicity made manifest that would be so game-changing several generations later, in the culture of the early 20th century. Küss undoubtedly knew the complex art of Dutch flower still lifes that was the point of departure for still life painting in the Viennese Biedermeier. And while Küss admittedly painted many utterly trivial, dull pictures, he here completely divests himself of complexity and turns towards a radical, completely new form of realism.

Ferdinand Georg Waldmüller's still life “Roses” of 1843, which was also acquired by the Princely Collections several years ago, takes us along a similar path. Here, too, the colorfulness of a luxuriant bouquet of flowers with a multitude of different blooms gives way to a single variety of magenta-colored roses. Waldmüller is also keen to reproduce the subtlety of silver and other materials, which all feature impressively in his painting. One almost wants to touch the silver in order to grasp the sensuality of the material.

The monolithic bouquet is also the central topic of Küss's painting, with all other motives grouped around it. When compared to Waldmüller, however, they are rendered very differently,

because Küss reproduces all his details in a far more abstract, simplified manner, despite the fact that the result is an almost provocative realism.

So what was it that influenced and molded this painter along his chosen path? Perhaps his second profession was what inspired him, for he made his living from professional photography, which at the time was a very young, new medium. It, too, depicts the environment in all its reality, though in its early years in particular, its suppression of all color (or at least its substitution by subtle shades of gray) offered a similar degree of abstraction to what we find in this painting by Küss – surely the most beautiful still life he ever painted.

Küss opened his own photography studio at Maria-Treu-Gasse No. 4 in the 1850s in the Josefstadt suburb of Vienna. In 1861, he joined the newly formed Photographic Society, and at Vienna's first Photographic Exhibition in 1864 he showed his portraits, art reproductions – and still lifes.

The worlds of photography and painting here merge together. There are also other indicators of just how close the relationship was between these two media at the time. Küss made an impressive photographic portrait of the painter Rudolf von Alt in his studio in 1862, while at the same time, another doubly talented artist was working for the Liechtenstein family. This was Raimund Freiherr Stillfried von Rathenitz, who left us both the only photographic evidence of the interior of the Princely Gallery in the Garden Palace in Rossau, and the only watercolor to show the large hall of the Gallery in all its vivid colors, painted in around 1900.

And what were the consequences of the art of Ferdinand Küss? They recall to us the delicate paintings of the Austrian realists of the 20th century and the still lifes of the Bregenz painter Rudolf Wacker – and perhaps also the still lifes of the British painter Lucian Freud in his youth that bear early witness to the fragile spirit of this incipient genius, who would later become one of the most significant artists of the latter half of the 20th century. ♦

Dr. Johann Kräftner is the director of the Princely Collections of the House of Liechtenstein and from 2002 to 2011 was director of the LIECHTENSTEIN MUSEUM, Vienna. He is the author of numerous monographs on the history and theory of architecture.



Yearning for the essence

In late March 1845, Henry David Thoreau borrowed an axe from a friend and went into the woods. This might sound as if he was engaged in some walk out into the wilderness – but in fact, he simply went to Walden pond near his home town of Concord in Massachusetts, and cut down pine trees to make himself a log cabin. Even the way the wood shavings flew off under the strokes of his axe made him happy. He called what he did an “experiment.” Experiments help us to find out things – and Thoreau wanted to find out what it takes to become happy.

On July 4, his cabin was finished, with two windows and a chimney he built himself. He didn't need anything else. It was Independence Day in the United States – and for Thoreau, it assumed a similar, but personal significance. In his hut, he was no longer dependent on anyone. He sowed beans, potatoes and corn, and since he was absent from society, he no longer had to meet anyone's expectations. He was alone with Nature, with the turning of the seasons, the light of dawn and dusk, the twittering of the birds – and with his own thoughts.

Thoreau continued with this experiment for some two years, and afterwards wrote up his experiences in his introspective book “Walden; or, Life in the Woods,” first published in 1854. It became a Bible for the simple life, and has remained the template for all opt-out books to this day. Anyone tired of living in civilization and wanting to find themselves in Nature again will reach for this classic of American literature.

Freedom beyond all conventions

Thoreau came from a well-situated family in New England. He studied at Harvard and was soon regarded as a remarkable personality – an eccentric perhaps, but one who knew more about the essence of life than did his fellow citizens who devoted themselves to their professional careers. He did not really feel at home in the bourgeois way of life. Thoreau was an oddball, but a very American one at that. To this day, Thoreau's concept of freedom seems to a European reader to be something radical and typically American. It had not been long since the first settlers had moved out West, leaving European high civilization behind them and escaping its feudal decadence. In historical terms, American society in Thoreau's day was still in its early years, though for him it had already forged too many of the chains of civilization. For Thoreau, freedom existed solely beyond conventions.

Yet Thoreau was representative of his time and his world in many more ways than he was himself aware. Like all Puritans, he declared luxury, sophistication and superficial abundance to be vain trumpery. He also adopted puritanical sermonizing in his own mode of speech. But one thing set him off from the petit bourgeois of Concord from whom he wished to escape: he was no missionary. Thoreau was in any case so radical in his individualism that he could never have made it his mission to impose his own values and way of life on others. As he himself wrote: “I would not have any one adopt my mode of living on any account;

for, beside that before he has fairly learned it I may have found out another for myself, I desire that there may be as many different persons in the world as possible; but I would have each one be very careful to find out and pursue his own way, and not his father's or his mother's or his neighbor's instead."

Searching for a path of his own

If you're going to find out which path is the one for you, then you have to listen to your inner voice. But this is difficult because from morning to night we are distracted by the whisperings of the world around us. Modernity and industrialization increase our tempo of communication to a hitherto unimagined degree. It is almost as if Thoreau were living in the era of Twitter and Facebook when he asked whether there was a point to progress if what it brings is so devoid of content and meaning, and fails to touch our true selves. "We are eager to tunnel under the Atlantic and bring the Old World some weeks nearer to the New; but perchance the first news that will leak through into the broad, flapping American ear will be that the Princess Adelaide has the whooping cough."

Thoreau was tough on himself and on the world. He had no time for the kind of forgiving humor that can accept things as they are. When he did make a joke, then it tended to the kind of sarcasm we have seen above, when he imagined that the first message the New World might receive from the Old would pertain only to the state of health of the old feudal classes. This, he implied, is not why mankind set out on its journey to the West.

Thoreau followed the philosophy of life as practiced by the Ancients: first, you have to know yourself. You have to find out who you really are. In the solitude of Nature, you don't just sharpen your sense of hearing for the natural world – for bird-song, the wind and the thunder. You also attune your inner ear to listen for the true needs of the soul. "Man, become your essence!" was a phrase beloved of the German Expressionists in around 1900, but it was something that Thoreau had not merely preached but put into practice a good half-century before them.

The lowest terms of life

The yearning for what is essential, for essence, is bound up with our mortality. Because our life is finite, we are afraid of living it the wrong way. An empty life that serves false idols would be a failed life. Thoreau was of the same opinion: "I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived

... I wanted to live deep and suck out all the marrow of life, to live so sturdily and Spartan-like as to put to rout all that was not life, to cut a broad swath and shave close, to drive life into a corner, and reduce it to its lowest terms ..."

So did he succeed? Is a cabin in the woods the solution to it all? From the outset, it was only an experiment to Thoreau, and he ended it after two years. Nor is there a straightforward answer as to why he stopped. He only offers us a hint. He tells us that we should not go out to explore new continents of the world. "Nay," he wrote, "be a Columbus to whole new continents and worlds within you," for he felt that those inner worlds offered "several more lives to live." He went on to add that he had not lived a week out in the woods before his feet had worn a path from his door to the pond-side: "It is remarkable how easily and insensibly we fall into a particular route, and make a beaten track for ourselves." But since the beaten track is death to inner freedom, a man who strives for independence like Thoreau had to embark for new shores in good time. ♦

Ijoma Mangold is a cultural-political correspondent of the weekly newspaper "Die Zeit." He has won the Berlin Prize for Literary Criticism, and is a member of the quartet of critics featured in the literature program "Lesenswert Quartett" on SWR TV in Germany. In 2017, Mangold published his first novel, entitled "Das deutsche Krokodil. Meine Geschichte" ("The German crocodile. My story").

Henry David Thoreau

Henry David Thoreau was born in Concord, Massachusetts, in 1817. After studying at Harvard he worked as a teacher. But since he was not willing to mete out corporal punishment to his students, he fell out with the school administration. He owed taxes but refused to pay them, and ended up in jail – albeit only for one night. He justified his actions in his essay "Resistance to Civil Government" – a work to which many refer to this day who practice civil disobedience. Thoreau died of tuberculosis in 1862. Whoever wishes to understand the American libertarianism of our own time has to start by reading Thoreau.





The terrible
simplifiers



Text: **Heinrich August Winkler** | Illustration: **Markus Roost**

We here take a look at political populism from its beginnings to our present time. We consider the danger it poses to liberal democracy, the inner logic of the “terribles simplificateurs,” and how we can combat them.

The first populist party of history didn't last very long. In Omaha, Nebraska, in the early 1890s, regional farmers' associations came together to form the People's Party, which was soon just called the Populists. Their stance was a shifting mixture of right and left: they wanted a policy of cheap money (and thus a renunciation of the gold standard), but also shorter working hours, rigorous limits to immigration and more direct democracy. They identified themselves as anti-big business, anti-urban, anti-intellectual, xenophobic and often anti-Semitic too. In the presidential election of 1892, their candidate was able to get 8.5 percent of the vote. They also got six governors, five senators and ten congressmen elected.

Four years later, the Populists suffered a defeat from which they never recovered. At the presidential election of 1896, they supported the Democratic candidate William Jennings Bryan, who had adopted bimetallism, which was their most important demand – in other words, supporting the dollar primarily with silver. But the Republican candidate William McKinley won the race. After that, free silver was no longer topical, and the Populists had gambled away their own political future. Demoralization set in, and the party started to disband a few weeks later.

Friends of simple solutions

This platform for the early populists did not remain without consequence, however. Their demand for more direct democracy was realized in many US states. The two big parties, Republicans and Democrats, also became zealous advocates of the interests of American farmers, and immigration was subjected to massive limitations, especially from East Asia. Early American populism was a product of crisis, arising at a time of frequent economic slumps and negative growth rates. The downfall of populism accordingly came with the economic boom that started in 1896. The American historian Richard Hofstadter once remarked that the Populist's utopia was something that lay "in the past," not in the future, though it was probably precisely this that had made the People's Party so attractive for a while.

The populists of our own time are not going to disappear as quickly as those of the late 19th century. But they have several things in common with their American precursors. They are friends of simple solutions. If they don't belong to "the people" themselves, then they at least pretend to represent them, and to speak for them more authentically than the political, business and intellectual elites who they claim have become alienated from the people. They reduce complex problems to their supposedly simple core. They demand radical solutions because these bring them the most applause. They operate in catchphrases that are ideal for kindling emotions and resentments. When they are on the right, they measure up the present against a sunlit past that was never as beautiful as they depict it. If they are on the left, they conjure up an egalitarian future of their own choosing. Depending on whether they stand on the right or the left, they choose their enemies according to either their xenophobia or their anti-capitalism.

Globalization as a perceived threat

Nothing is quite so convenient for the populists as the weaknesses of their opponents. They thrive on them, and nothing is

as dangerous to them as a serious endeavor by their established antagonists to identify and rectify their own flaws and omissions. After the election of Donald Trump in November 2016, American liberals embarked on a self-critical debate about what they had done wrong. One theory was that the liberals had concentrated on an academic discourse that was of interest only to the "post-materialist milieu" of the so-called educated classes, not the traditional "materialistic electorate" of the Democrats in the industrial regions of the Rust Belt. In other words, they had forgotten

an elemental principle of democracy: soliciting the consent of the governed, of which the Declaration of Independence of 1776 had already spoken.

But it would be wrong to reduce populism to a movement among layers of society who feel left behind in material terms – especially the populism of the nationalist right that is the dominant variant today in North America and Europe. There are indeed those who see themselves

as underprivileged, often even threatened in their social existence. But then there are many well-educated, well-off members of the middle and upper classes whose main concern is to preserve their vested cultural rights. They reject liberal attacks on traditional values and ways of life, and want to defend the identity and sovereignty of their country against all those who seem to have no interest in its historical achievements. What unites all these groupings is a feeling of being threatened by different aspects of globalization: by mass migration, increasing competition on the goods and job markets, a ubiquitous cosmopolitan class that questions all traditional ties, and by an anxiety about the future in the face of robotization and the digital revolution.

Parallel worlds and echo chambers

Present-day populism owes much of its rise to that same digital revolution. In the past three decades, virtual parallel worlds and echo chambers have emerged that partition themselves off from the outside world and thus threaten to undermine the rational exchange of views that is the basic principle of the civic realm

“The victory of the ‘Leave’ faction signified a triumph of populism in the motherland of parliamentary democracy, and plunged the European Union into its biggest crisis to date.”

and pluralistic democracy. In this regard, the sociologist Andreas Reckwitz speaks of a “general crisis” and of the “subdivision of the public sphere into diverse communities” – which is an apt description of the fundamental change that Western societies are undergoing.

Europe’s broad swathes of liberal-minded forces have barely begun with the process of self-critical engagement that is necessary to face up to the populist challenge. When the so-called migration crisis reached its climax in 2015/16, any criticism in Germany about the limits of the country’s capacity to absorb and integrate immigrants was either ignored or simply rejected out of hand, both by the coalition government comprising the right-wing CDU and the Social Democrats, and by the opposition, namely the Greens and the Left Party. The beneficiary of this accumulated silence was the nationalist-populist “Alternative für Deutschland” (“Alternative for Germany,” AfD), established in 2013, which only now began to enjoy mass support. What helped it more than anything was the widely held impression that the AfD was the only critical instance prepared to put its finger on purported deficits and deficiencies.

The EU’s biggest crisis to date

Germany’s migration policy had an impact in other European countries, too. The allusions to imminent mass immigration, primarily from the Islamic world, played a major role in mobilizing voters in Poland in the fall of 2015, where the populist agitators of the nationalist-conservative “Law and Justice Party” won the parliamentary elections. A similar trend occurred in the final phase of the referendum campaign for Brexit in the United Kingdom in spring 2016.

The victory of the “Leave” faction signified a triumph of populism in the motherland of parliamentary democracy, and plunged the European Union into its biggest crisis to date. The UK Independence Party (UKIP) under Nigel Farage and the Conservative populists under Boris Johnson promised their voters heaven on earth in the event of a break with Brussels. None of the Brexiters was interested in the immense complexity of the material that would have to be negotiated between Great Britain and the EU after such a break. In order to win the referendum, the leavers made as if British membership of the EU were a problem that could be solved like the proverbial Gordian Knot – if not by a stroke of a sword, then at least with a simple stroke of the pen. But there is no Alexander the Great on the horizon who might accomplish such a task.

The danger of false categories

For the adherents of liberal, pluralistic, representative democracy, populism offers an instructive object lesson. The populists are terrible simplifiers, and thus often manufacturers of chaos. Their opportunities grow when the traditional democratic parties forget that they too have to act in a populist manner, explaining in very simple terms (albeit within certain boundaries) what they stand for and what they want; when those traditional parties ignore the problems that many people face, or try to whitewash them; when they spend more time in the inner echelons of their party and governmental apparatus than they spend engaging with their voters; and when they fail to make it clear to everyone that it can be fatal to assign power to those who think only in the categories of friend and foe, and who see no higher good than whatever they happen to declare as being in the national interest.

Whenever these terrible simplifiers manage to assume power, liberal democracy is in danger. As long as they follow the inner logic of populism, they can ultimately only be destructive. Should they actually develop into responsible players, then they grow out of their populism – though the prospect of any such learning process is rather unlikely. Populists can be successful for a while, or at least seem to be so. But in the longer term, the material and immaterial cost of such a government increases when it believes it can flout the checks and balances of the liberal polity. The consequences are then borne by those societies that have allowed populism to get that far. ♦



Heinrich August Winkler was born in Königsberg (today Kaliningrad) in 1938. He was Professor of Modern History at Humboldt University in Berlin from 1991 to 2007. He has received many awards for his research and his publications, most recently the Leipzig Book Prize for European Understanding

in 2016 and the Great Cross of Merit of the Federal Republic of Germany in 2018. In the fall of 2019, Winkler published a new book entitled “Werte und Mächte. Eine Geschichte der westlichen Welt” (“Values and powers. A history of the Western world,” C. H. Beck).

“The solution is in the air”

Recorded by: **Stephan Lehmann-Maldonado**

Fuels can be made today from air and sunlight – completely CO₂-neutral, but still only in small amounts. More tests and an expanded network of contacts will be necessary before the ETH spin-off Synhelion will be able to market this new technology properly. And a lot of people will have to undergo a change in their way of thinking. But Synhelion’s CTO Philipp Furler doesn’t lack for optimism.

“Sure, the electric sports cars by Tesla are chic. But their batteries make them very heavy. This is less of a disadvantage on the road, but it’s an issue if you want to use electric motors in the air or on water. That’s why I think electric aircraft and ships are unrealistic, and certainly not economical. It would be pointless to build aircraft that are so heavy they can only take off without passengers. Or electric ships that can just barely stay afloat due to the weight of their battery. Aircraft and ships are still going to need liquid fuels because they offer 20 to 80 times more energy per volume and mass.

Nevertheless, I’m optimistic that we’ll be able to reach the UN’s climate goals. For some ten years now I’ve been busy trying to create synthetic fuels from air and sunlight. I came to this research topic through Aldo Steinfeld, my former professor at ETH Zurich, the Swiss Federal University of Technology. Solar energy was my research topic for both my Master and my doctorate. Steinfeld’s colleagues have set up two small companies that are complementary in their aims: Climeworks and Sunredox. I co-founded the latter, and it has meanwhile become Synhelion, with me as its Chief Technology Officer (CTO). Its goal is to replace fossil fuels with synthetics.

Our process is based on a simple idea: carbon dioxide (CO₂) and water vapor are both found in the air. On the roof of ETH Zurich, we have now constructed the world’s first-ever facility for turning these two raw materials into a kerosene that can be used in aircraft, for example. We first managed this under laboratory conditions back in 2014, and since 2019 we have been able to do it under normal conditions.

There are just a few steps to this ‘magic trick,’ which is why we are subject to fewer conversion losses than is the case with other technologies. First we take the CO₂ and the water from the surrounding atmosphere. For this, we use the technology developed by Climeworks. Then we capture sunlight with mirrors and concentrate it so as to generate process heat of up to nearly 3000 degrees Fahrenheit. We need this temperature so that our reactor can break down CO₂ and water thermochemically into hydrogen and carbon monoxide, and produce a synthesis gas called ‘syngas’ for short. We have also developed a thermal reservoir in which we can store heat on a temporary basis. This means we can even run our reactor during the night.

We process the syngas into methanol or kerosene using a standard procedure. In this way, we can make any kind of fuel – though our plant at ETH is regrettably only able to produce roughly three fluid ounces a day. In Madrid, where we run a larger facility as part of a European research project, we can make rather more.

Syngas isn’t our invention. It’s a standard product in the chemical industry, though it’s normally made from natural gas, not CO₂ and water. The methods we use to separate hydrogen from water are also already known. What’s new about our approach is that it isn’t based on electricity or electrolysis, but is driven by purely thermal means. We make do with air and sunlight as our resources. During combustion, our fuel always only releases the same amount of CO₂ and hydrogen that we’ve already taken from the air. So it’s a CO₂-neutral loop.

During my doctoral studies, many people thought our idea was pie in the sky. That’s changed, because industry is looking for ways to lower CO₂ emissions. And individual countries are setting climate goals that are ever more ambitious. In order to advance our technology, Synhelion has been engaged in a close collaboration with the Italian energy giant Eni since 2017. Our core team comprises seven people. Besides me, it also includes our scientific advisor Aldo Steinfeld and our strategic advisor Giorgio Mazzanti. He’s 91 years old, the co-inventor of the plastic polypropylene, ex-chairman and ex-CEO of Eni, and he’s constantly involved in our cause.

Philipp Furler

When he was a young student at ETH Zurich, Furler was able to join his professor, Aldo Steinfeld, on a visit to the Paul Scherrer Institute. It was there that he had a key experience: for the first-ever time, he saw how concentrated sunlight could make a ceramic block melt within seconds. The impact of this on him was electric. Since then, he's been fascinated by high-temperature solar chemistry. Furler completed his doctorate in this field in the Department of Mechanical and Process Engineering at ETH Zurich in 2014. In 2018, he was awarded an Executive MBA by the University of Strathclyde. Furler is 36 today, and is the Chief Technology Officer of Synhelion. His aim is to make commercially viable synthetic fuels from carbon dioxide and hydrogen. To balance out the heat of his job, he goes rowing on Lake Zurich and likes to visit the local zoo on weekends with his two sons.



As CTO, it's my task to make our technology commercially viable. We've got a multi-stage development plan for this. In the current phase, we're testing the components of our new system. They are some 40 times bigger than what we run at ETH. In Switzerland, we are building the receiver that generates the process heat using concentrated sunlight. Parallel to this, Eni is developing and testing the reactor in Italy. We test our receiver in Jülich in Germany, where the world's largest artificial sun is located, 'DLR Synlight.' This means we can test our prototype without being subject to the whims of the weather. This year, we want to expand our components by a factor of ten and integrate them in a solar tower.

We are convinced that our technology is more efficient and cheaper than comparable methods for CO₂-neutral fuels. In the future, we're going to be able to offer one gallon of CO₂-neutral kerosene for between four and eight dollars. This means we're more expensive than the current price of some 2 dollars per gallon for fossil kerosene. But fossil fuels are probably going to get more expensive – not least because the EU might drop its tax exemptions in the future.

It's still undecided where we are going to build our first proper production facility. Here in Central Europe we have solar radiation of about 110 kilowatt hours per square foot per year.

Our technology gets interesting from around 200 kilowatt hours, which is what you find in southern Italy and southern Spain. In terms of solar radiation alone, the Atacama Desert in Chile would be the most profitable place, because there you get over 300 kilowatt hours per square foot. But in the near future, southern Europe is going to be simpler in logistical terms. We want to start commercial operations in 2022.

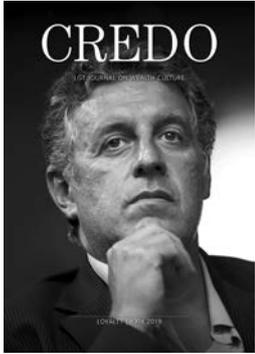
As a basic rule, we will eventually be able to produce some 5000 gallons of kerosene each day on a surface area of about 250 acres. So it's perfectly conceivable that we could provide synthetic fuels for all global transportation. To provide enough fuel for all the aircraft in the world, you'd need a surface area equivalent to that of Switzerland – or a third of the Mojave Desert in California. Over there, our solar mirrors wouldn't get in anyone's way.

Regardless of where our facilities might be built: our fuel can be stored and transported easily, because we can use the existing transport infrastructure for fossil fuels. This also makes our approach a simple one.

I enjoy going to work every day. What is it that especially motivates me? I'm making an active contribution to solving the climate problem, and one day I'll be able to board an aircraft driven by our synthetic fuel." ♦

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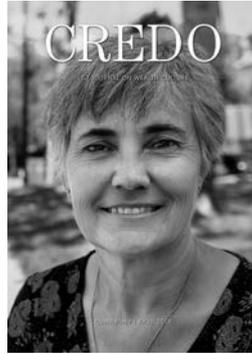
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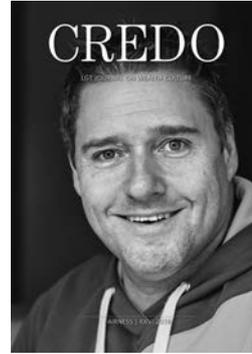
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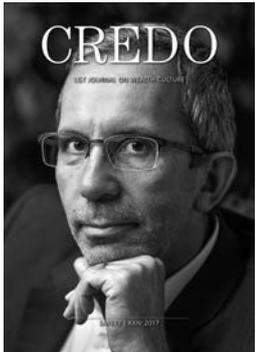
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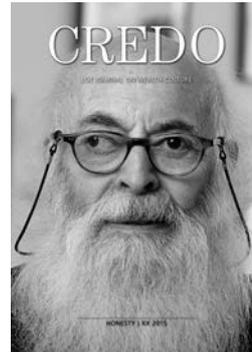
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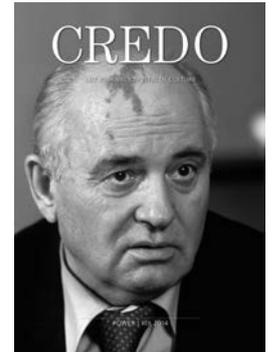
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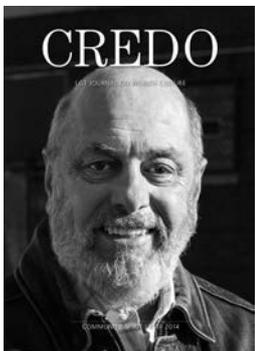
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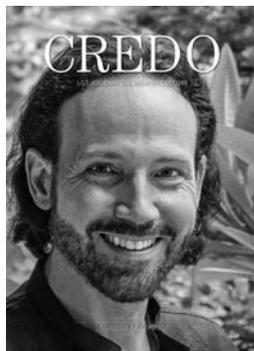
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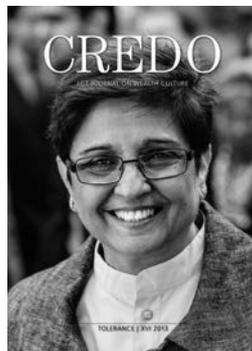
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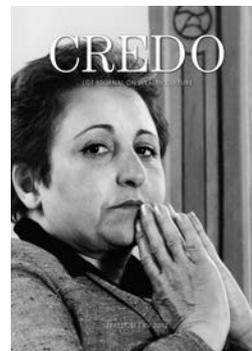
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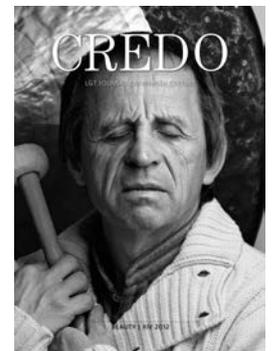
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