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CONTENTS AND CONTRIBUTORS

William Uricchio is a professor of comparative media studies at the Massachusetts Institute of Technology. He is the spring 2015 Holtzbrinck Fellow. **Christopher D. Johnson** is a research associate with the *Bilderfahrzeuge* project at the Warburg Institute in London. He is the spring 2015 Nina Maria Gorrissen Fellow in History. Author and essayist **Evgeny Morozov** studies the political and social implications of technology. He is the spring 2015 Bosch Public Policy Fellow. **Daniel Rosenberg** is a professor of history at Robert D. Clark Honors College at the University of Oregon. He was the fall 2014 Axel Springer Fellow. **Andrew Keen** is an entrepreneur, writer, and public speaker. His most recent book is *The Internet Is Not the Answer*. **Norbert Riedel** is Commissioner for International Cyber Policy for Germany's Federal Foreign Office. **Sandro Gaycken** is Senior Researcher on Cybersecurity at the European School of Management and Technology in Berlin. **Christoph von Marschall**

is Chief Diplomatic Correspondent for the German daily *Der Tagesspiegel*. **Joshua Cohen** is the author, most recently, of *Book of Numbers* (2015). He was an Academy visitor in fall 2014. **Tom Drury** is the author of several novels. He is the spring 2015 Mary Ellen von der Heyden Fiction Fellow. **Karen Hagemann** is the James G. Kenan Distinguished Professor of History at the University of North Carolina at Chapel Hill. She is the spring 2015 German Transatlantic Program Fellow. **Esra Özyürek** is an associate professor and chair for contemporary Turkish studies at the European Institute of the London School of Economics. She was the fall 2006 Bosch Fellow in Public Policy and returned to the Academy in spring 2015 as a guest speaker. Interdisciplinary artist **Sanford Biggers** is an assistant professor at the School of the Arts at Columbia University. He is the spring 2015 Guna S. Mundheim Fellow in Visual Arts. Renowned poet, literary scholar, and Soviet-era dissident

Tomas Venclova is the spring 2015 Axel Springer Fellow. Poet **Ellen Hinsey** was a Berlin Prize Fellow in spring 2001 and is in Berlin as the DAAD artist-in-residence for 2015. **Martin K. Dimitrov** is an associate professor of political science and director of the Asian Studies Program at Tulane University. He was the spring 2012 Axel Springer Fellow at the Academy. **Stephan Haggard** is the Lawrence and Sallye Krause Distinguished Professor at the University of California, San Diego. **Robert Kaufman** is Distinguished Professor of Political Science at Rutgers University. Berlin-based writer **Brittani Sonnenberg** is the author of the novel *Home Leave* (2014). **Jonathan Kahn** is a professor of law at Hamline University. **Bert Rebhandl** is an Austrian journalist, film critic, and author based in Berlin. The acclaimed poet **Mary Jo Bang**, a professor of English at Washington University in St. Louis, is the spring 2015 Ellen Maria Gorrissen Fellow.

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PUBLISHER'S NOTE

SPRING HAS ARRIVED on the Wannsee. A season of transition and rebirth, a season befitting the American Academy in Berlin, as we ourselves undergo a bit of transition.

As many of you know, the Academy's celebrated executive director of the past 17 years, Gary Smith, decided to return to independent scholarship at the end of 2014. His retirement from the institution he so instrumentally shaped, intellectually guided, and creatively inspired has given us pause and necessary time for reflection. As we await the arrival of the Academy's new president, Gerhard Casper—a former president of Stanford University and longtime trustee of the Academy—we have had time to evaluate how we can continue to do what we have been doing well, even better.

Since the very beginning, when Richard Holbrooke midwifed his prescient idea into existence, we have believed that what the American Academy could best do would be to provide our resident fellows and visitors, some of the best and brightest minds in the United States, the time and space to work, think, and, most paramount, talk with their German counterparts in person. The place where they would do this would be in this grand villa on the Wannsee, where once the esteemed banker Hans Arnhold and his family hosted one of the most interesting salons of Weimar Berlin. It is both a moving and meaningful reality that the descendants of that family, chased out of their home and resettled in New York, remain the prime supporters of our ongoing efforts. In a day and age where 140 characters and "likes" have become the cultural vernacular, we, with the magnanimous support of the Stephen and Anna-Maria Kellen Foundation, find it even more crucial to provide a real place for the old art of conversation, where new intellectual constellations take wing and the tendrils of slow diplomacy are left to unfurl.

This issue of the *Berlin Journal* takes as its critical focus exactly the issue of technological change and its effects on culture and society. Essays by fellows William Uricchio, Christopher D. Johnson, and Daniel Rosenberg investigate the centuries-long development of information culture, multifunctional algorithms, and encyclopedic "data," and Evgeny Morozov looks cautiously at the privatization of data and the Internet of Things; the novelist Joshua Cohen, author of the forthcoming and already-acclaimed *Book of Numbers,* shares a satirical diary excerpt from the "founder of the world's most successful online search engine," and, finally, a recent panel, co-hosted with the European School of Management and Technology, offers space for the uniquely German perspective on online privacy and security, among much more.

As always, the work of our resident fellows—present and former—forms the core of the *Berlin Journal,* with a new short story by novelist Tom Drury; a look at overlooked women in the military during World War II by historian Karen Hagemann; former fellow Ellen Hinsey in discussion with the poet and former Soviet dissident Tomas Venclova; a personal essay by alumna Esra Özyürek of the London School of Economics on researching her book on German Muslims; two essays on the persistence of authoritarianism by Martin K. Dimitrov and Stephan Haggard and Robert Kaufman, from the upcoming Richard C. Holbrooke Forum; and, not least, a stunning visual portfolio by our resident artist Sanford Biggers, whose materials range from sand and tapestries to break-dance floors and the electric keyboard.

Over these past few months, during this time of transition, the Academy has provided space, by way of our public-lecture series, to all of these speakers, as well as to Thomas Friedman of the *New York Times* and Lawrence Summers, President Emeritus of Harvard.

We continue to privilege in-person discussions, on issues and topics that require patient untangling, and often that address topics of particular relevance to the German-American friendship. As Gerhard Casper said of this year's Henry A. Kissinger Prize recipients, former Italian President Giorgio Napolitano and former German Foreign Minister Hans-Dietrich Genscher, who will receive the prize on June 17: "They made political decisions with a view toward strengthening the transatlantic relationship." May that we all continue to be so wise in our cognizance of the transatlantic future, keeping the boat right and steady.

As we bid a remorseful farewell to two of our founding chairmen this past winter, Richard von Weizsäcker and Thomas Farmer—two men with whom I worked closely from the very first days of the American Academy—may we heed the words of Jean Monnet, invoked so eloquently by Foreign Minister Frank-Walter Steinmeier at the Academy's twentieth-anniversary celebration, last October: "Nothing is possible without people; nothing is lasting without institutions."

Gahl Hodges Burt
Vice Chairman and Acting Chairman

FOCUS

Data, Information, Knowledge, Wisdom?

Anthony McCall: *Conical Solid* (1974).
Drawing for animation cinematography.

RECOMMENDED FOR YOU

Prediction, creation, and the cultural work of algorithms

by William Uricchio

WE TELL OUR HISTORIES in predictable ways, particularly when it comes to technology. Looking back on the developments that litter the past, we tend to see inevitability, squeezing the facts, as needed, to fit the tale of our present. The uncertainties that necessarily abound with any new technology, when things like standards, formats, uses, and social protocols get worked out, seem largely filtered from our recollection of the past. Inherited technologies seem to hew to a narrative of progress, entering the world conceptually, like Venus, fully formed.

This tendency makes the appearance of new technologies something to be savored. For a brief moment, uncertainty looms large. A contradictory mix of anxieties and expectations, fears of disruption and hopes for salvation swirls around—until the dust finally settles and, like its predecessors, the once-new technology settles into a state of taken-for-grantedness. In this sense, the recent explosion of headlines in which the term "algorithm" figures prominently and often apocalyptically suggests that we are enjoying such a moment, as a "new" technology appears in the full regalia of unruliness. Better, the emerging algorithmic regime is more than "just another" temporarily disruptive new technology. It offers insights into a fundamentally different way of articulating our relationship to the world, different, that is, from the project of the modern as first formulated in the early fifteenth century and embodied in technologies such as the printing press and three-point perspective. I realize that this "added value" argument fits the usual pattern of apocalyptic expectation and anxiety regarding new and not yet familiar technologies—but even paranoids have enemies.

My thesis is that the algorithm, an approach to problem solving that goes back at least to Euclid's *Elements* (ca. 300 BC) and that enjoyed significant development in the hands of Leibniz and Pascal, has achieved new cultural force as a technology thanks to a confluence of factors that include big data, intensive processing power, and high-speed networks. It embodies a configuration of the subject-object

relationship quite different from technologies that have been used to articulate the project of the modern (the press, etc.). Yet, like these technologies, the algorithm can be read as defining an emerging epistemic era. If we are indeed like those in the early fifteenth century who were poised on the edge of a new order of things, will we, like some of them, be inclined to embrace their potentials for a new vision of ourselves in the world, a new social order? Or will we miss the radical potentials of a new technology, retrofitting them to serve the still-dominant interests of the old? Technologies do not, of themselves, change anything, but are rather socially constructed and deployed. And in this sense, as we watch the possibilities of a new technology take shape in the hands of the highest bidder, we have good reason to be anxious. But the algorithm is less the problem than the mentality of those it serves.

Definitional Dynamics

THE TERM "ALGORITHM" seems to conjure up responses disproportionate to the simplicity of its meaning. Formally speaking, an algorithm is simply a recipe, a process or set of rules usually expressed in algebraic notation. The actual values plugged into the algorithm are less the point than the step-by-step formulations for their processing. They scale easily, whether working with the relatively thin data of the pre-computer era or the over 2.5 quintillion bytes of data generated daily (as of this writing). Yet, despite their relative simplicity, algorithms today pose some significant definitional problems, mostly through a series of misapprehensions.

Communications theorist Tarleton Gillespie has noted three broad uses of the term that obscure its meaning. Algorithms are invoked as *synecdoche* when the term stands in for a sociotechnical assemblage that includes the algorithm, model, data set, application, and so on. They function as *talismans* when the term implies an

"objectifying" scientific claim. And they reveal a *commitment to procedure,* formalizing social facts into measureable data and clarifying problems into models for solution. Indeed, one might step back and note that these three uses say much more about social anxieties and aspirations than they do about algorithms. How, for example, can one make a claim to "objectivity" with an authored protocol whose operations depend on the highly variable character and structure of a particular data set?

The definition of the algorithm is also complicated by more insistent epistemological problems. Sociocultural anthropologist Nick Seaver finds that most discussions of algorithms get caught up with issues of access and expertise. Access is an issue because many commercial algorithms, Google's for instance, are closely guarded secrets. *If only we had access . . . ,* the mantra goes. But even if we did have access, we would immediately face the expertise problem, for most individual algorithms inhabit vast interdependent algorithmic systems (not to mention models, goals, data profiles, testing protocols, etc.)—and making sense of them typically requires large teams of experts. Even more troublesome is the fact that any given process usually has many possible algorithmic combinations (ca. ten million in the case of a Bing search), some of which might be uniquely deployed or used for purposes of personalization. Individual algorithms and algorithmic clusters are recycled and appear in different settings, with pre-World War II era elements still in circulation today. This means that we can never be precisely sure of which set of algorithmic functions we are examining. Even if we were, the work of personalization would limit our ability to compare findings.

A further twist appears in the form of disciplinary specificity. The valences of the term "algorithm" differ in mathematics, computer science, governance, predictive analytics, law, and culture, complicating cross-disciplinary discussion. And unlike earlier technologies, developments in machine learning have enabled algorithms to self-optimize and generate their own improvements. They can now self-author and self-create. This greatly complicates notions of authorship, agency, and even their status as tools, which imply an end user. Together, these various factors combine to render the simple definition of an algorithm as a "rule set" into something quite loaded.

Algorithmic Culture

GIVEN THE ROLE that algorithms currently play in shaping our access to information (Google) and the social world (Facebook), and their centrality to finance (algorithmic trading) and governance (from predictive policing to NSA-style parsing of vast troves of data), looking at their *cultural* work might seem a low priority. Each of these sectors reveals some affordances of the algorithm, and their most visible—and disturbing—applications reflect the interests of the prevailing power structure. The abusive deployment of algorithms says more about the contradictions of our social order than the algorithm per se, and focusing on the latter puts us in the position of a bull fixated with the matador's cape.

But the cultural use of algorithms throws into sharp relief the capacities of this technology to reorder the subject-object relationships at the heart of representation. Although we may still look at algorithmically enabled art the same way we look at the art of the past (just as some look at algorithmically enabled tools and see another means of old-fashioned control), it is far easier to see through the representation process and find there the residue of algorithmic capacity. The arts help us to see more clearly.

Just as algorithms have a deep history and have recently achieved new power thanks to their changing circumstances (big data and dramatic improvements in processing and transmission), their use in the arts also has a long history and a dynamic and quite powerful present. The canon form in music, essentially an algorithm, goes back at least to the Middle Ages; and algorithms have appeared from the *Musikalisches Würfelspiel* attributed to Mozart to Lejaren Hiller's work with the ILLIAC computer, in the 1950s. The musician Brian Eno summarized the artistic stance of this work well when he said,

> Since I have always preferred making plans to executing them, I have gravitated towards situations and systems that, once set into operation, could create music with little or no intervention on my part. That is to say, I tend towards the roles of planner and programmer, and then become an audience to the results.

This disaggregation of artistic process is nothing new (Rodin famously relied on it for his major scuptural works), but it has served as a persistent characteristic in the long history of algorithmic art.

In the visual arts, the group known today as the Algorists (Roman Verostko, Manfred Mohr, A. Michael Noll, Frieder Nake, and others) began, in the 1970s, to use computer-driven algorithms in a similar manner, deploying them as tools by programming instructions and watching the printer do the work. Just as canons demostrate the power of a simple melody to grow into incredible complexity, visual pieces such as Roman Verostko's *Floating Cloud* attest to the ability of relatively small programs to generate works of striking beauty. In these works and others across media, something of the artisanal paradigm still survives. Explicitly positioned within what the sociologist Howard Becker would term an "art world," this work, whether musical or visual, nevertheless faced some of the same problems as photography in the nineteenth century and film in the twentieth. Can a "machine" create art? Is the absence of the human touch a net loss to the creative act? Can the so-called autographic arts (painting, for example) legitimately disaggregate design and execution? These examples of algorithmic art, like early film and photography before them, emulated traditional art works (display, authorship, galleries, buyers) but were subject to a critique of their "true" aesthetic value.

Today, in an era of the newly enabled algorithm, these (still ongoing!) historical battles seem almost quaint, rendered marginal by the appearance of two new deployments of algorithms in the cultural sector: taste prediction and text generation. Consider EchoNest's prediction algorithms that comb through millions of users' behaviors as well as musical texts, seeking correlations by extrapolating from past behaviors to future desires or by searching for other users' patterns that might offer a basis for suggestions. To the extent that users play along and offer consistent feedback, Pandora, Spotify, or other streaming music services that use EchoNest's algorithms demonstrate an uncanny ability to identify and provide access to the desired, the familiar, and the reassuring. The same principles apply to Amazon's book recommendation service or Netflix's film and video suggestions. The past is prologue, as the data generated through our earlier interactions shapes the textual world selected for us. No "surprises" or "unwanted" encounters, just uncannily familiar themes and variations. This logic extends into the informational domain as well, where it has been the subject of a well tred but sharp critique that argues algorithms have created an informational "echo chamber," in which our already existing views of the world are reinforced but rarely challenged.

But taste prediction has another fast-growing dimension, in some settings effectively serving as a gatekeeper for cultural production. Epagogix, a company that specializes in risk mitigation, has found a niche in advising investors in the film and television industry about the likely success of a given project. The script as well as various casting configurations are assessed by their proprietary algorithms, and a financial assessment provided that may (or may not) serve as an incentive for investment. Needless to say, long-time industry specialists view such developments with suspicion, if not contempt, but investors, convinced by the seeming objectivity of numbers and the system's mostly accurate predictions, think otherwise. Investor response is understandable at a moment when most stock trading is algorithmically determined: it is a vernacular of sorts. But it also confirms Gillespie's observation of the algorithm as talisman, radiating an air of computer-confirmed objectivity, even though the programming parameters and data construction reveal deeply human prejudices. The bottom line is that decisions regarding what will and will not be produced are being based on data of unknown quality (What do they actually represent? How were they gathered?), which are fed into algorithms modeled in unknown ways (with "success" often meaning calculable profit rather than the less-measurable metric of aesthetic quality).

The second breakthrough of newly empowered algorithms is textual production. According to the *New York Times*, over one billion stories were algorithmically generated and published in 2014. In a quiz that appeared on March 7, 2015, the *Times* asked its readers "Did a Human or a Computer Write This?" with the tag, "A shocking amount of what we're reading is created not by humans, but by computer algorithms." The quiz doubtless confounded many of its readers, and the accompanying story described the rapid growth of storytelling algorithms that have nearly cornered routine sports and financial market reporting. These two domains are well-structured, with timelines and datapoints that enable easy characterization and serve as low-hanging fruit to an emergent industry. But the *Times* story gave a sense of the ambitions and the state of the game for storytelling algorithms produced by companies such as Narrative Science, and the results were impressive.

Similar developments can be found in the music industry, where the customized *production* of music—rather than simply the selection of pre-existing music—appears to be the next step after taste prediction; and in the film sector, where companies like Magisto claim to analyze image, sound, and their storytelling potentials, paving the way to production armed with "Emotion Sense Technology." Meanwhile, interactive documentaries, often in the form of textual environments that a user can navigate through, are slowly moving toward personalized "sit-back" experiences in which an algorithm seamlessly guides the user through the "most-relevant" elements of the data-set. Although interactive in principle, no choices are required from the user, who simply experiences a personalized linear film.

The nearly 300 reader responses to the *Times* article amply demonstrated the provocative nature of these developments: text-generating algorithms force us to ask what it means to be human and how that relates to artistic production. For most letter-writers, the answer was clearcut: algorithmic creativity in traditional cultural sectors is oxymoronic. Culture is precisely about *human* expression, and anything else is either trickery or parody. But to designers of algorithms, such discourse—to the extent that it articulates a human *je ne sais quoi*—is useful in pinning down precisely what is disparate between human and algorithmic expressions, enabling engineers to define and chip away at the problem. Much like the issue of intelligence, the long-held assumptions regarding man-the-measure are undergoing a Copernican-like decentering, and in this sense, the coincidental appearance of developments such as post-humanism, actor-network theory, or object-oriented ontology suggest that sectors of the academy are indeed thinking seriously about a paradigm shift.

All of this is to say that the cultural deployment of algorithms has different valances. An early and continuing strand of creativity has harnessed algorithms to the work of familiar artistic paradigms, where things like authorship and attribution are still relevant. But a new and fast-emerging set of developments has seen algorithms used as filters, shaping our access to the cultural repertoire; as a gatekeeper, helping to determine what will and will not be produced; and as a semi-autonomous producerly force, writing texts, composing music, and constructing films. And these latter developments are growing more intensive, driven by the biennial doubling of processing capacity captured by Moore's Law, the ever-more pervasive place of computational systems in our lives, and the ability of algorithms to self-improve without active human intervention.

They raise crucial questions about agency and attribution: How to negotiate the space between human designers and machine learning? What is the nature of authorship and the creative act?; about point of view: Whose values, experiences, and perceptions are bound up in this new order?; and about cultural access: What notion of "personalization" enables or delimits our encounters with texts, and with what implication?

The Bigger Picture

WHY DO THESE QUESTIONS, and the increasing insistence with which they are posed, matter? What are the stakes? To put it in the apocalyptic rhetoric-of-the-new I warned of at the outset: it is because we may well be participating in the death of the modern (and the birth of some as-yet-unnamed epoch). Heidegger used an image, the *Weltbild*, to mark the modern's birth, saying that the moment at which the world becomes a picture is the same moment that the human emerges as the subject in a characteristically modern subject-object relationship. The world as picture (*Welt als Bild*), he tells us, "does not mean a picture of the world but the world conceived and grasped as picture." Heidegger goes on to specify that the world picture "does not change from an earlier medieval one into a modern one, but rather the fact that the world becomes picture at all is what distinguishes the essence of the modern age."

He argues that the modern social order can be defined through a representational system characterized by precisely defined subject-object relations (the world as picture), a metaphysics of exactitude, and an underlying spatiotemporal grid. Descartes emblematizes this order. But we can also point to earlier developments such as Gutenberg's press and Alberti's notion of perspective, born in the first half of the fifteenth century, for technologies that amplified the subject and her viewing position. Perspective offered a formal system to represent the world as seen by the subject, just as the printing press served as a resonator for the authorial self, and both technologies served the project identified by Heidegger as the modern.

The centuries between these early developments and Heidegger, despite countless historical undulations and discoveries, demonstrate a consistent logic of attribution, of a stable self and its relationship to the object-world, a notion of mathematics as a language of precision, calculability, and predictability. And this order remains deeply familiar to us, pervading our lives, whether through our financial systems, our notions of science, or the construction of our technologies of visual representation.

In contrast to the precision, calculability, and specificity of the modern subject-object relationship bound up in the *Weltbild*, the algorithmic layer stands between the calculating subject and the object calculated, and refracts the subject-centered world. It filters what we can see, produces our texts with unseen hands, and reshapes our texts, rendering them contingent, mutable, and "personalized." Its

implications, if we take thinkers like Heidegger seriously, can be profound. Consider the contrast between Diderot's *Encyclopédie* and the crowd-sourced *Wikipedia*, or between Canaletto's painting of Piazza San Marco and the hundreds of differently authored photos that in the aggregate constitute Photosynth's "synth" of the same. In each case, one subject/author is known, their point of view embodied, their relationship to the object clear, and their text stable. And the other subject/author is collective and diffused, the points of view multiple, the relationship to the object algorithmically mediated, and the text changing and mutable. These differences, *grosso modo*, distinguish the project of the modern, the age of the *Weltbild*, from the enablements of the algorithmic.

Authorship, in the algorithmic context, is both pluriform and problematic. Although mostly effaced, in the case of Photosynth it is the author of the individual photos (or in an interactive documentary, the author of the video clips); largely enacted, it is the author of the experience—that is, the navigating user; fundamentally enabling, it is the author of the algorithm; and in terms of what we actually see and select from, it is the algorithm as author. Descartes' triumphant subject and the *Ich* implied in Heidegger's *Weltbild* are not eradicated, for their traces remain abundant. Rather, they are fundamentally repositioned by the algorithmic regimes that now stand between subject and object.

If we understand this, we can think through the opportunities that await, rather than panicking at the loss of the old certainties. We can explore the affordances of algorithmically enabled collaboration and the new forms of collective creativity that might ensue, rather than tolerating the crude use of algorithmic systems to exploit and oppress. We can try to understand the implications of widespread personalization, the challenges of a predictive economy in which data trails become constitutive, and the meaning of a culture of radical contingency. And we can probably learn from our predecessors in the late Middle Ages, poised on the cusp of the modern, first encountering the printing press and three-point perspective. What did people make of new and, in retrospect, era-defining technologies *before* that era was defined? The printing press was both a trigger for the modern (the stabilization and spread of knowledge), and unleasher of unruly practices that accompanied its initial decades. In one case, new technologies were embraced and put to work as harbingers of the new, and in the other, they took form in aberrant and contradictory ways reflecting the brackish waters of late-medieval thinking.

The "newness" of the algorithm comes with the danger that it will be retrofitted to sustain the excesses and contradictions of the fast-aging modern. But it also offers an opportunity for critical thinking and an imaginative embrace of what just might later come to be known as the Age of the Algorithm. □

ON ENCYCLOPEDIC CHAOS

The centuries-long, unruly attempt
to know it all

by Christopher D. Johnson

JUST AS THE DREAM of ordering all there is to know has long propelled the encyclopedic impulse, so, too, has the spectre of chaos, of chaotic, uncontrollable, heterogeneous growth. An emblem for this spectre is a passage in Virginia Woolf's *Orlando* (1928): "And just as the ivy and the evergreen rioted in the damp earth outside, so did the same fertility show itself within. The life of the average woman was a succession of childbirths. She married at nineteen and had fifteen or eighteen children by the time she was thirty; for twins abounded. Thus the British Empire came into existence; and thus—for there is no stopping damp; it gets into the inkpot as it gets into the woodwork—sentences swelled, adjectives multiplied, lyrics became epics, and little trifles that had been essays a column long were now encyclopaedias in ten or twenty volumes."

That Pliny initially calls the items in his massive *Natural History* (77–79 CE) "trifles" [*nugae*], that a commentary on Martial's epigrams, Niccolò Perotti's *Cornucopia* (1489), functions as an encyclopedic dictionary of Roman culture and history, or that any entry in Wikipedia, however trivial it may be, can lead, with a click on a link or two, to the fact that by the end of 2014, the total number of articles in all Wikipedias (in nearly 290 languages) exceeded 21 million, all confirms this law of chaotic growth.

If you look up "encyclopedia" on the English Wikipedia website, you are greeted by an image of six well-worn volumes from the fourteenth edition (1906) of the *Brockhaus Konversationslexikon* (later renamed the *Brockhaus Enzyklopädie*). This paper monument-document, whose first edition was published in 1796 in the wake of the great success of the *Encyclopédie*, was for two centuries the most reliable and popular German encyclopedia.

Yet the twenty-first and apparently last paper edition of the *Brockhaus Enzyklopädie* appeared in 2008. Likewise, *Encyclopedia Britannica* went completely digital in 2012. Further, many earlier editions of these works—to say nothing of almost all the Latin and vernacular texts that constitute Renaissance encyclopedic writing—are now accessible online, via Google Books and other digital archives, thus obviating the need to manipulate physical books at all. Indeed, the last fifteen years have seen paper encyclopedias try, often in vain, to compete with the digital model advanced by Wikipedia, whose home page suggests at once the Tower of Babel and the almost completed Death Star. With its astonishing growth (almost five million articles in the English version alone), increasing ubiquity, debatable accuracy, innumerable hyperlinks, and embrace of amateurization (some 70,000 "users" are active in editing its articles), Wikipedia: The Free Encyclopedia has become synonymous with the encyclopedic impulse. Nevertheless, the history of encyclopedism still raises critical cultural, epistemological, and perhaps even metaphysical questions. Such questions can, moreover, help us parse the increasingly promiscuous and nebulous use of phrases like "knowledge society," "Information Age," "the digital turn," "algorithmic thought," and, of course, "information overload."

IN 1539, JOACHIM STERCK VAN RINGELBERG published the first printed book with "encyclopedia" in the title, *Lucubrationes vel potius absolutissima kyklopaideia* [Lucubrations or rather the most complete encyclopedia]. While its fairly conventional account of the seven liberal arts is praised by the great humanist Erasmus, Ringelberg's book is most remarkable for how it incorporates, as a kind of supplement, his 1529 book titled *Chaos*. Invoking there Ovid's account of creation out of chaos from the beginning of the *Metamorphoses*, Ringelberg underscores the potential utility and pleasing variety of the material he adduces to excuse his disregard of any systematic order. Insisting instead on the analogy between world and book, his *Chaos* treats this curious sequence of subjects: Of God, Of Christ and Mohammed, Of gods and pagan theology, On appropriate justice, On military matters, Considerations on the art of medicine, The order and subjects of the arts, Of philosophy,

Of study methods, Physics, Description of storms with reference to physics, Of comets, Of the rainbow, Of animals, Considerations on rural matters, Of plants, Signs of a storm, Several histories and fables, Poetic similitudes, and Other considerations on poetics. In this manner, Ringelberg's "Kyklopaideia" literally and figuratively ends in "chaos," in the potentially endless play of poetic similitude. Yet even Johann Heinrich Alsted (1588–1638), who systematically completes two encyclopedias that eclectically marry numerous strands of Renaissance thought, left himself an out with a section titled *farragines disciplinarum* (mishmash of disciplines). In this respect, even encyclopedic writers who stress order over variety, conservation over discovery, flirt with "chaos."

Encyclopedism is a critical engine throughout much of Chinese and Arabic intellectual history; but it especially flourishes in different "kinds" or genres of writing in Europe between the fifteenth and eighteenth centuries—before the *Encyclopédie* edited by Denis Diderot and Jean le Rond d'Alembert gives the encyclopedic impulse its familiar form. More specifically, Renaissance encyclopedism oscillates between a conservative, retrospective, memorious pole, and a more heuristic, progressive, inventive pole. This oscillation is only made possible by the enormous, often chaotic, variety and fungibility of encyclopedic genres or "kinds." Though only few early modern texts were actually titled *encyclopedias*, one finds myriad species of textual and material encyclopedism, all of which aimed to exhaust—or at least pretend to exhaust—the knowledge of a particular subject or subjects. These include: commonplace book, poetic commentary, lexikon, thesaurus, critical dictionary, anatomy, theatrum, Kunstkammer, historia, atlas, emblem book, biblioteca, library, museum, epic poem, novel, polyglot Bible, etc. No wonder, Neil Kenny observes in his book on sixteenth-century French encyclopedic writing: "Renaissance encyclopedism is primarily a question of genre." With this, the discursive and generic distinctions between encyclopedic, non-encyclopedic, or even anti-encyclopedic texts often prove blurry, at best. The classicist Pierre Hadot affirms "the very simple principle that a text should be interpreted in light of the literary genre to which it belongs." But when a genre is still nascent, still comprised of many competing species, then interpretation must turn to extra-literary principles as well.

While there are fundamental continuities between these genres and their medieval and Enlightenment cousins, and while the pathos-laden impossibility of knowing (and writing) everything is, of course, a timeless condition, such encyclopedic writing responds directly to what Dan Rosenberg and Ann Blair have dubbed "early modern information overload." Precipitated by the discovery of new worlds and old texts, by the advent of print culture, the growth of libraries, the increase in curious readers, and by the fear, Blair argues, that a time might return when learning falls into oblivion, the generic instability and fungibility of Renaissance encyclopedism are heuristic reactions to the unmanageable abundance and variety of information. The

Czech philosopher Johann Amos Comenius, for example, blames the obsessive "piling up of material" [*Stoffhäufung*] characteristic of humanist natural history. Accordingly, his pansophic books, such as the 1651 *Patterne of Universall Knowledge*, sacrifice concrete detail and fact for what is ultimately an otherworldly vision. Conversely, an alphabetical commonplace book like Laurentius Beyerlinck's ginormous 1631 *Theatrum vitae humanae* forgoes the hope of structuring or synthesizing knowledge in favor of simply making it available to readers.

All early modern encyclopedic writing tries to achieve a persuasive order [*ordo* or *dispositio*]—be it disciplinary, thematic, topical, inductive, synthetic, narrative, historical, geographic, or alphabetical. All such attempts are also confounded, however, by the abundance [*copia*] and variety [*varietas*] of the materials adduced. Such *copia* and *varietas* are the rule when it comes not only to the genres of Renaissance encyclopedic writing but also to what encyclopedic texts generate internally. Encyclopedic writing, that is, tends centrifugally toward never-ending accumulation, heterogeneity, and fragmentation—in short, toward the chaos, disorder, or what the literary scholar William N. West, quoting Hegel, calls the "bad infinity" of the list. And if Renaissance writers also have difficulty distinguishing between raw information and processed knowledge, this may well be because the real and conceptual lines between the two tend to blur.

The same is true today. Consider the supremely difficult exam that Black Cab drivers in London still must pass: known simply as "The Knowledge," it demands the cabbie be able to plot any route or find any landmark in London by memory. Threatened now by GPS technology, it is staunchly defended by those who say that cabbies with "The Knowledge," unlike GPS, have a far greater ability to deal with contingency and novelty.

AS WE LOOK FORWARD to digital encyclopedism, it is useful to keep in mind Umberto Eco's cardinal semantic distinction between the dictionary and the encyclopedia. The dictionary, Eco argues, is concerned with logical and therefore finite categorizations, while the encyclopedia eschews metaphoric, substitutive logic for metonymy, whereby the connections between things, words, events, etc. are essentially contingent, rhizomatic, and therefore potentially endless. The dictionary, as an "impoverished encyclopedia," may be the model for certain species of philosophy, but it is anathema to the kind of writing of literature that Eco values. Encyclopedic writing, he contends, be it in the Renaissance or more recently—think Jorge Luis Borges, Raymond Queneau, Carlo Emilio Gadda, David Foster Wallace, or Eco himself—skeptically embraces the inexhaustible, generative chaos of reality rather than pretending it can be formally contained.

Further, questions concerning authorship and authority are complicated greatly by the rabid intertextuality that characterizes most encyclopedic writing. As one tries to distinguish between early modern encyclopedic writing by

an individual and by a group of collaborators, it is essential to recall that most authors are already "crowd-sourcing" their texts, even if the crowd is unaware of it. Latin encyclopedic writing is especially intertextual, as these texts cross political, cultural, and confessional boundaries more easily. But encyclopedic writing in the vernacular also tends to be wildly intertextual. To read Robert Burton's delightfully vertiginous *Anatomy of Melancholy* (first edition, 1621) or Pierre Bayle's subtly skeptical *Dictionnaire historique et critique* (first edition, 1697) is to enter a labyrinth of quotations.

Easily the most capacious, influential expression of Enlightenment thought, *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*, was published in 28 volumes, including 11 volumes of plates, between 1751–72. Like most forms of encyclopedic writing, the *Encyclopédie* is at once conservative (tending toward the compilation of what has already been written) and progressive (inventing ways to discover new things and perspectives). In the 1765 *Advertisement* to the eighth volume, Denis Diderot gives expression to this acute historical consciousness:

> Our principal aim was to gather together the discoveries of preceding centuries. Without having neglected this initial view, we would hardly be exaggerating in praising the several folio volumes by which we have transported new riches to the depository of ancient knowledge. For if a revolution of which the germ is perhaps being formed in some unknown part of the world, or is being hatched secretely in the very center of civilized countries, erupts at some time, topples cities, disperses people once again, and brings back ignorance and dark times, if a single complete copy of this work is conserved, all will not be lost.

An extraordinary boast that, centuries later, will be ironically inverted in Borges's short story, "Tlön, Uqbar, Orbis Tertius" where an idealized encyclopedia becomes a materialist nightmare, it also strongly echoes the idealism of earlier encyclopedists. Specifically, Diderot and d'Alembert repeatedly invoke their debt to Francis Bacon's encyclopedic plans detailed in the *Great Instauration* (1620).

Following Bacon, their "Figurative System of Human Knowledge" and "Genealogical Tree" delineate different kinds of knowledge according to the faculties that produce them—memory, reason, and imagination. These diagrams together with the *renvois* (cross-references) that appear in individual entries are designed to serve as the chief if perhaps insufficient means by which accumulating knowledge, pegged to the alphabetical order of the entries, acquires real "order" and so, ideally, the ability to change the way readers think. As Diderot's long entry on the "Encyclopédie" insists, encyclopedic order, or the "enchaining" of subjects, is indeed attainable; this despite our inability to perceive or imitate God's infinite, inimitable order, despite the monstrous "improportion" in the length of the articles, and despite the differences in the style and method of the many contributing authors. It is achievable principally because of the use of *renvois*, "the most important aspect of encyclopedic order." Above all, it is the *renvois* "of things" that furtively remedy the nominal, conceptual, and disciplinary chaos created by alphabetical order (for why should "César" come before "Chaos," "Zzéune" after "Dauphin"?). Direct ancestors of the hyperlinks that create rhizomatic paths between entries on Wikipedia, these cross-references

> clarify the object, indicate the close links [*liaisons*] with those things that touch immediately upon it, and the distant links with other things which one thought were isolated; they recall common notions and the main analogues; they strengthen implications; they interlace the branch to the trunk and give everything that unity so beneficial to the establishment of the truth and for persuasion. Yet, when needed, they also produce a completely opposite effect. They set notions at odds; they allow principles to be contrasted; they secretly attack, upset, reverse some ridiculous opinions that one would not dare insult openly. If the author is impartial, they will have the double function of confirming and refuting, of disturbing and reconciling. . . . The entire work will gain from them an internal force and a secret utility.

Yet this insistence on the critical role of such *liaisons* is also marked by real ambivalence. Admitting that the "typographer" often does more than the author to forge these links, Diderot wavers between believing that the successors to the *encyclopédistes*, their "nephews," will perfect their labors or ruin them.

As for ruination, Laurence Sterne and Gustave Flaubert both satirically figure encyclopedism as a form of delightful but useless dilettantism. The "Tristra-paedia" fueling *Tristram Shandy* (1759–67) is a part of Sterne's larger Rabelasian "cock and bull" story in which "[d]igressions, incontestably, are the sunshine;—they are the life, the soul of reading." Flaubert's last and angriest novel, *Bouvard and Pécuchet* (1881), features two enthusiastic but foolish copyists who vainly try to master each and every discipline. Written to mock his contemporaries, this "encyclopedia of human idiocy" ends with Flaubert becoming nearly indistinguishable from his protagonists.

As for perfection, Paul Otlet (1868–1944) and Otto Neurath (1882–1945) explicitly make the *Encyclopédie* the model for their own encyclopedic plans. Detailed in Alex Wright's recent book, *Cataloging the World: Paul Otlet and the Birth of the Information Age*, Otlet's Mundaneum, Universal Bibliography, and other fantastically ambitious encyclopedic projects brilliantly anticipate many elements of the World Wide Web and digital encyclopedism. Alternately, beginning in 1934, from his exile in the Netherlands, the Austrian philosopher and sociologist of knowledge Otto Neurath collaborates with Niels Bohr, John Dewey, Bertrand Russell, and Rudolf Carnap to develop a program for the

"Unity of Science and the Encyclopedia Model." Drawing on Viennese logical positivism and the Leibnizian notion of a *scientia universalis,* this now pragmatic, now utterly idealistic project is also a response to the looming catastrophe in Europe. Anti-nationalist, anti-systematic, Neurath prescribes the tracing of encyclopedic "clusters," "aggregates" that would then enable "cross-connections" between scientists, thereby creating an ever-evolving "mosaic" or interdisciplinary "orchestration" of the sciences. Aiming not for "totality" but rather to establish a "framework" for science, Neurath rejects hierarchical models and offers instead an "anti-pyramid." Such encyclopedism, in brief, encourages heuristic disorder as constitutive of non-systematic unity.

This vision, though, is also marked by a keen historical consciousness, an anti-metaphysical bent, often absent in encyclopedic enterprises. Remaking Bacon's famous image that casts his encyclopedic program as a voyage of discovery, Neurath writes:

> We are like sailors who on the open sea must reconstruct their ship but are never able to start afresh from the bottom. Where a beam is taken away a new one must at once be put there, and for this the rest of the ship is used as support. In this way, by using the old beams and driftwood the ship can be shaped entirely new, but only by gradual reconstruction.

Given such contingency, it is all the more fitting that the *International Encyclopedia of Unified Science* published Thomas Kuhn's paradigm-shifting *Structure of Scientific Revolutions* in 1962. For Kuhn and Neurath may be said to share Foucault's notion that only through an archaeology of knowledge that unearths the different epistemological assumptions of each discipline and historical period can some understanding of the whole be won. Still, for all the "social utility" and ultimately social and political justice that Neurath hoped his encyclopedia would foster, he only chose writers and envisioned readers who were specialists. His encyclopedia, of which only two volumes were completed, is not written for the average Joe and Jane, nor was it peddled by salesmen going door-to-door in postwar America and the UK.

And yet, tellingly, Otlet and Neurath also worked together for a while on a plan for an encyclopedic museum, *Nuovo Orbis Pictus,* named after Comenius's 1658 visual encyclopedia for adolescents. Meant to be accessible to all, this never-completed encyclopedic project hoped to construct a unified vision of knowledge out of the endless variety of the world, or, more accurately, from the images, maps, diagrams, and statistics that represent the world. That it foundered even before it set sail suggests perhaps that the world had grown too big, too chaotic, for their universal, irenic vision to have succeeded. Or maybe it suggests, given the ever-growing reach of Wikipedia since its 2001 founding, that they were simply too far ahead of their times. □

OUT OF THE CLOUDS

The case for making digital identity
a public good

by Evgeny Morozov

SILICON VALLEY, WITH its youthful arrogance and penchant for vulgar disruption, makes for an easy scapegoat—especially in Europe—and it's all too easy to conflate the rapaciousness of some technology companies with the genuine promise of digital technologies. And yet, caught between the wild extremes of cyber-optimism and cyber-pessimism, Europe would be wise to remain agnostic and acknowledge that digital technologies are both our best hope and our worst enemy.

For one, big problems like climate change and disease are unlikely to be tackled without them. The Internet of Things shows some promising early signs that shared resources can be managed differently and more effectively, empowering smaller, local communities in an unprecedented way. A world full of sensors does not have to undermine values like fairness and solidarity or only enrich the elites—even though this is how things might turn out without any active intervention from citizens.

Consider Finland, a country with that rare commitment to both equality and innovation. In the late 1990s, the Finnish highway patrol, instead of trusting what the drivers said about their income bracket, began using mobile phones to verify their actual income brackets in the country's tax database. Rich Finnish drivers can now expect to receive six-digit fines. A smart, sensors-powered road, integrated with the country's income database, would result in rich drivers paying proportionately higher speeding fines than everyone else. Likewise, Helsinki's transportation board has recently released Kutsuplus, an Uber-like app, which, instead of dispatching an individual car, coordinates multiple requests for nearby destinations, pools passengers together and allows them to share a much cheaper ride on a mini-bus (each route is calculated in real-time and depends on where the passengers are heading). There's no reason why public transportation shouldn't run this way.

But it would be wrong to deny that digital technologies also create political and economic challenges of their own. They aggravate various negative tendencies of contemporary society, entrench corporate interests over those of the public, or establish efficiency as the default value according to which our civic life must be optimized.

Not surprisingly, for every Helsinki, with its deployment of sensors to promote solidarity, there's a city-state like Singapore, which aims to deploy technology to boost efficiency. Last year, Singapore announced that it was going to cover its bus stops, parks, and traffic junctions with above-ground boxes with sensors from various government agencies. The ostensible goal is to shift public services toward an "anticipatory" model, so that common urban problems are avoided altogether, with sensors and cameras monitoring the length of taxi queues, the cleanliness of public areas, and any instances of illegal parking. For example, cleaners might be dispatched only to those areas that actually need them (no word yet on whether the sensors would report anyone caught spitting chewing gum, a punishable offense in Singapore).

Contemporary critiques of the smart city rightly emphasize those aspects of urbanism—serendipity, spontaneity, community—amiss in today's debate. A truly "smart city" is not the one that can do more with less—a great slogan for the times of austerity—but the one that is conscious, even proud, of its own limitations and imperfections. It respects each and every harmlessly deviant minority and doesn't violate the rights—like the right to the city—

of its inhabitants. Efficiency, productivity, and anticipatory problem-solving are laudable goals for hi-tech authoritarians in Singapore and sales managers at IBM or Cisco. But cities have always treasured more than commerce. For example, they also host festivals—recreational and leisurely activities antithetical to the Taylorist hyper-efficiency paradigm of the "smart city." A city open to leisure is not any less "smart" than Singapore. We'll regret letting technology boosters convince us otherwise—if only, of course, we still have the time for all those regrets.

HOW DOES ONE translate this humanistic attitude into specific technologies? Here even the critics don't have much to offer. A good way to start, perhaps, is to try to define the antipode of the corporate-run "smart city." What is its ideological opposite, which, through sharp contrasts, would reveal its benefits and limitations? Is it the "dumb city"? Today, when trash cans brim with sensors, and streetlights feature sophisticated cameras, such a longing for analog urbanism is perfectly understandable, especially in the wake of the NSA scandal. Alas, such nostalgia is historically illiterate: cities have always been feats of ingenious engineering, serving as testing grounds for breathtaking inventions, be it sewers, vaccines, or metro trains. There's no authenticity to be found in a technology-free city.

The same, on a broader scale, can be said of society at large: cyber-pessimism—and a blanket rejection of algorithms and sensors—cannot possibly be an adequate response at a time when the world is beset by so many problems. The political task ahead, then, is to amplify the positive uses of these digital technologies and minimize their negative ones. However, given that the very term "digital technologies" spans everything from electronic books to drones to smart thermostats, we badly need some analytical clarity. It might be helpful to focus on three important gateways around such technologies—sensors, filters, profiles—for it is this triad that shapes who exercises digital power today.

Take something as banal as doing a Google search. Google's search box functions as a sensor of sorts—it captures your "intent" to find something. To deliver the relevant results, Google has to rely on filters to separate relevant results from irrelevant ones. It determines relevance partly by drawing on a "profile" of you that it stores it its memory—and it adds your current search (and your subsequent clicks) to that profile. But since Google is now present in many different domains—from self-driving cars to maps to books to videos—your "profile" is really a totality of all your interactions with Google.

Likewise, Uber draws on sensors—our smartphones—to understand where we are in the city; uses filters to match supply and demand at the most profitable price; and relies on "profiles"—of both the driver and the passenger—to reduce mutual concerns about misbehavior, adding information generated on each trip to the profile of both parties.

This ability to capture our behavior (in the form of clicks or location) in real-time and to store it for future,

personalized use is one of the key features of the emerging data-centric capitalism. Its promise is the ultimate and total personalization of our everyday experience based on the preferences that are captured in our "profiles." Such personalization can also increase the efficiency of resource use, reduce waste, and lead to more sustainability: it's not just a myth of Silicon Valley.

Think of the announcement, from a few months ago, about the partnership between Uber and Spotify, the music streaming service: from now on, you, the passenger, would be able to play your favorite Spotify songs in any Uber car. This is possible precisely because our music preferences have been collected into a profile—a digital identity of sorts—and that profile can now be shared across various platforms.

The Uber/Spotify example might seem trivial, but think of the many different "profiles" that the new smart devices can—and some already do—generate: smart thermostats generate profiles of our preferred energy use, smartphones (not to mention self-driving cars) generate profiles of our physical activity and movement, search engines and social networks generate profiles of our information needs and reading habits. Anybody thinking about the future provision of transportation, education, energy, and health services cannot ignore this data—for if they do, a bunch of (mostly American) entrepreneurs will emerge to disrupt them.

This data, once available, can lead to all sorts of socially useful experimentation and innovation. Entire communities might opt out for a different model of public transportation—along the lines of the Helsinki model—whereby a bus service would pick up passengers on a unique route that is mapped out anew every day based on actual transportation needs of citizens in a given community. Cities like Seoul are experimenting with such models already. The same applies to energy generation and resource sharing more broadly.

But this wave of social experimentation can only become possible if the community has access to the underlying data. Without the data, communities will be stuck with the models imposed on them by the corporate providers of those services. So instead of having personalized bus services, we would forever be stuck with Uber's individualistic model.

Alas, the only level of action that technology companies realize is that of the individual consumer. We are all invited to join the sharing economy, but only as entrepreneurs who will put up our skills, our free time, our flats, our cars, our "dead capital," as some call it, for rent on the market. This is, after all, what today's sharing economy is about: relying on information and communication technologies to establish efficient markets in everything and turn everyone into a psychotic entrepreneur. Why psychotic? Well, because we are invited to always be anxious about our reputation: our every interaction with various parts of the sharing economy is recorded, ranked, and stored for posterity, affecting all our future interactions.

It is in this sense that the sharing economy is truly neo-liberalism on steroids: it creates markets everywhere while also producing a new subjectivity in its participants. A case in point is a recent episode in Britain, where a woman was told she could not use Airbnb because she had fewer than 100 Facebook friends (it's through our Facebook identity that Airbnb establishes our "authenticity" and "validity" as customers).

The end game here is easy to envision: who ever controls the most and the best sensors will eventually control the profiles. Ultimately, we'll end up with just two companies—Facebook and Google—controlling the entire field of "digital identity." This means, among other things, that these two companies will become the key intermediaries in how every other service—energy, health, education, transportation—is provided. And both of these companies, each in its own way, benefit from network effects: Facebook's service is more valuable the greater is the number of people who pursue their social activities within Facebook, while Google's service is more valuable the more of the world's knowledge it has organized.

Isn't it obvious that Google's search results are better if it knows where you are, what you have searched for in the past, who your friends are, and so on? It very well may be that both search and social networking are, in fact, the kinds of activities that can only be meaningfully pursued by monopolies that draw on an extensive base of information gathered from various—rather than just one—social domains.

So, instead of breaking up Google into various components—for example, making search separate from maps or maps separate from email—a different kind of break-up is in order. We must take the matter of digital identity completely out of commercial jurisdiction and instead turn it into a public good. Think of this is as the intellectual infrastructure of data-centric capitalism.

THE ONLY WAY to ensure that citizens won't be crushed by emerging data-centric capitalism is to guarantee that its main driving force—data—remains squarely in public hands. My every click on any app or site, my every interaction with my smart thermostat or my smart car, my every move in the city should accrue to me, the citizen—not to the companies offering these services. By assuming that "click capital"—and this is what it is, a form of capital—naturally belongs to corporations, the public would eventually see its control over these corporations diminish completely.

Furthermore, some basic services—very simple searches, basic email functionality, and so on—could and should be provided free and as part of public infrastructure. In exchange for this, some of the anonymized data in our digital profiles could be used by public bodies—cities, municipalities, utilities—to improve their service offerings, making them more sustainable and personalized. (Personalization, by the way, does not need to lead to the kinds of reputation concerns that arise in the context of using Uber or Airbnb,

where clients are ranked and evaluated: one can still have full personalization and anonymity.)

This does not mean that technology companies would simply disappear. Instead, they can offer whatever advanced and personalized bonus services they want—after they license the use of this data. Google might offer features—some of them paid and desired, perhaps, just by 5 percent of users—that would not be offered in the basic email service. It might also offer some advanced personalization of search, thanks to its algorithms and advanced artificial-intelligence technology. Other companies—including start-ups—would suddenly be able to compete with Google, as they will be able to draw on as much data about their customers as Google and Facebook alone can do now.

If things continue as they are today, we are likely to end in a world where one or two giant technology companies become key gateways to all other services solely because they control our digital identities. Those services, too, would be provided by ruthless technology companies keen to disrupt everything under the sun, using the most brutal tactics: think Uber and Airbnb. Alternative modes of social and economic organization—which would try to use resources collectively but on a logic different from the corporate one—would be blocked at every possible moment.

How do we avoid this scenario and move toward something more positive? The first step is to problematize the question of data. Is data an asset? Who owns it and can it really be owned? If we are moving into a data-centric and data-intensive capitalism, what does it mean for the public not to be able to control the key resources of the age? Can politics still maintain any effective control over the market if its key resource—data—lies beyond its reach? And what happens once we start imagining ourselves as "data entrepreneurs" rather than "data citizens"?

Consider the case of Shawn Buckles, a Dutch student who last year decided to auction off his most intimate data—his personal emails and online chats, his browsing history, his geolocational data, his train records, his calendar—to the highest bidder. The auction attracted 28 bids—including the winning one of 350 euros. Buckles is an activist, not an entrepreneur; he wanted to raise awareness of how much data we are giving away to governments and corporations. But his prank also raises a deeper philosophical question: Can we sell our data as any other commodity? Or should the government step in and exercise some paternalism—as, for example, when it bans us from selling ourselves into slavery?

The narrative pushed by proponents of data entrepreneurship is that it is better to make a buck off our personal data than let Google and Facebook exploit it for free. But there's another implicit assumption at work here: the belief that as long as we are not under duress when doing so, we should be free to trade our data—and as much of it—as we want. It is a seemingly uncontroversial assumption, at least in some areas. Why, after all, stop people who want to give away their health records to universities or hospitals

to contribute to scientific discoveries? Ideally, we might want them to do so out of humanitarian reasons, but one can think of exceptions (e.g. when time is of the essence), where the promise of immediate monetary compensation might get the job done faster.

People who surrender their data for research purposes do not normally expect their own lives to be transformed as a result. But most of the data we surrender to private companies has a different quality to it: it's highly actionable and can immediately lead to changes in our own lives. For example, we allow our smartphone to access our location—and our ads become more relevant. We search for some nutritional supplement online—and ads for weight loss follow us everywhere. We shop for certain products—and the store Target infers we might be pregnant and sends us relevant promotional materials.

Much of our personal data has this important life-shaping quality to it: its tight, real-time integration with commercial institutions that structure our daily life—from restaurants to travel sites to shops—is responsible not just for the particular choices that we make but also for the kinds of anxieties and aspirations that inform how we arrive at those choices. The problem is that the moment we reveal that we are entering this experimental space—via a search query or a Freudian slip in an email or even some random outburst of emotion detected by our smart glasses—our autonomy is compromised. The immense plasticity of our environment presents us with options that seek to push our self-development in a direction favorable to advertisers (and, increasingly, to nudging regulators in the government) rather than let us travel in a direction that we would choose had such interference not taken place. To sell our intimate data in bulk is to shrink this experimental space to a minimum.

F EUROPE IS serious about creating a digital society that adheres to the humanistic values it holds dear, it won't be enough to create a European Google: to think in those terms is to miss the shift to data-centric capitalism. We should not just think of new ways to regulate Google and Facebook and the rest as they exist today; we must also rethink the very basic form in which the services that they currently provide are to be provided in the future. It is not clear that the model with which we have ended up would be favored by anybody concerned with public interest.

What's needed is structural and institutional innovation that could reclaim data as a public good, place it outside of the market, and then promote entrepreneurial activities on top of it. This won't be easy, but the incentives, for politicians at least, could not be greater: another decade of inaction, and Google and Facebook will end up running their own quasi-state, because they could very conceivably control both our identity and our access to basic infrastructure—something already occurring in parts of the developing world. A more depressing development for human freedom can hardly be imagined. □
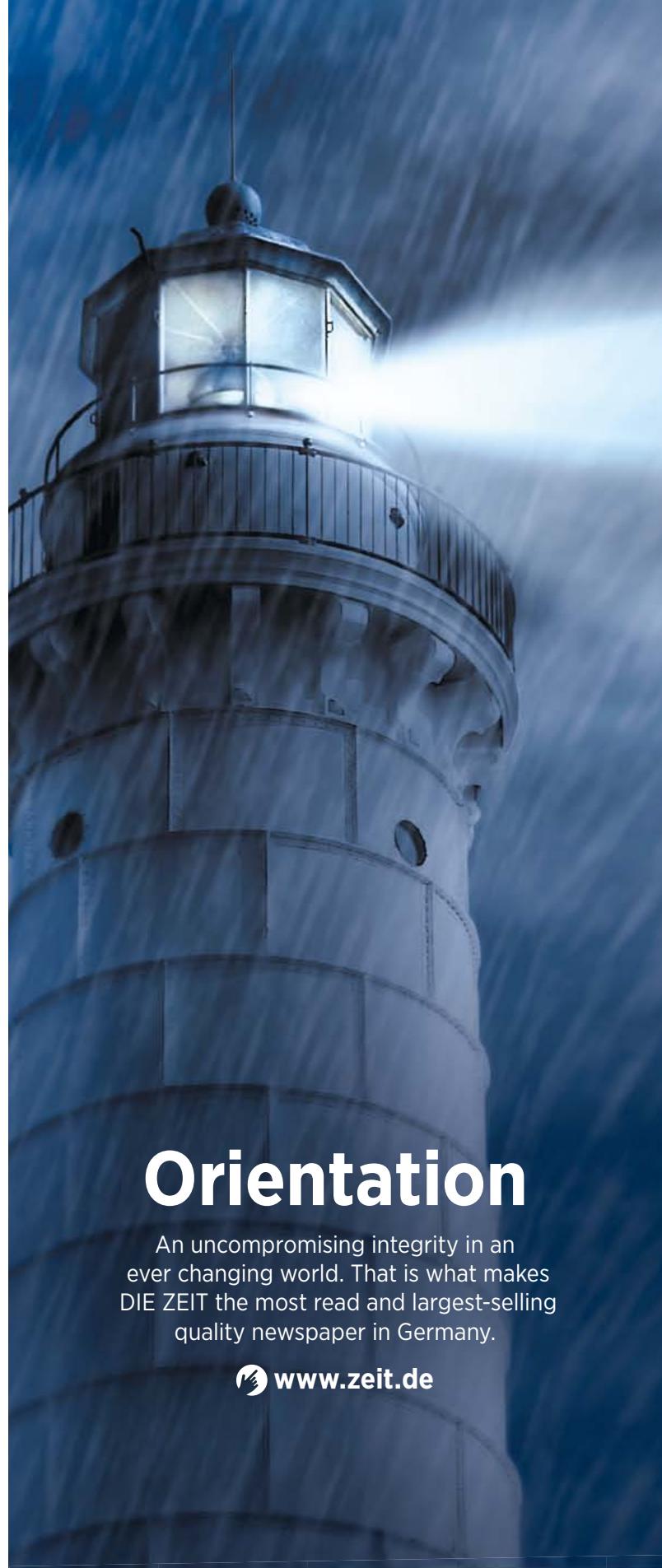
WHENCE "DATA"?

The surprising origins
of a ubiquitous term

by Daniel Rosenberg

OPEN THE NEWSPAPER on any given day and you are likely to find one or more stories about the importance of data in our everyday lives. These stories are no longer clustered mainly in the business or science section, as they were just a few years ago, but also in the sports, entertainment, and fashion pages, and very often in the headlines themselves.

If the press is to be believed, Germany won the last football World Cup because of data, and Barack Obama the last two US presidential elections. The losers in these contests were data aficionados, too, of course. Sport is now governed by the statistical rules of "moneyball," and politicians are "data guys"—to use the phrase favored by Obama's last electoral opponent. "Data" has acquired a kind of aura, as if it unlocked a realm beyond opinion, beyond partisanship, beyond theory.

Claims about the ubiquity of data in our environment may be more or less accurate, but even as claims they represent something powerful: the *idea* of data—"data-ism" even—has become central to contemporary culture, to our understanding of the world, and ourselves.

Neither the idea of data nor the technical practices that support it are altogether new. In one way or another, we have inhabited data cultures since the first tax rolls were inscribed and populations counted. And even as a subject of explicit discussion, the term "data" has been around for some time. In English, we've been talking about "data" for more than three centuries now. And, in important ways, the history of the term is a history of modernity itself.

TRAVEL BACK IN TIME to the 1640s, and people are already talking about "data," not in the arts and letters section of the local shipping news, granted, but in a number of specific and important contexts. In some ways, this is not surprising: the seventeenth-century world was steeped in many kinds of data immediately recognizable as such today, from demographer John Graunt's mortality tables to the gold-clasped accounts book that Louis XIV kept in his pocket to the "weather clock" designed by Christopher Wren—the architect who rebuilt London after the Great Fire of 1666—for recording temperature and barometric pressure in real time. Yet the "data" being discussed at the time was distinct from any of these things, and, in general, on the subject of "data," it wasn't a Graunt or a Wren who was doing the talking.

How do we know? These days, there are plenty of new data tools for doing the research. Google, for example, offers an online device called the Google Books Ngram Viewer to chart the frequency of words and phrases by year in the books included in its database. With only a few keystrokes, an everyday user can perform quantitative analysis on a corpus of over five million books, a feat impossible for a scholar with the best resources in the world only a few years ago.

For the term "data," the Google Ngram Viewer (see *Image 1*) produces a very intuitive graph, a curve that creeps along close to zero, begins to pick up in the nineteenth century, and rockets skyward in the middle of the twentieth. At first blush, this seems right, even obvious. In the increasingly mechanized and bureaucratized world of the nineteenth century, data gathering and analysis mattered more and more. In the networked electronic world of the twentieth and twenty-first centuries, data went nova.

But we ought to be careful about how we use these new big data tools in the arena of culture where they are mostly unfamiliar, particularly when they provide results that reinforce what we are inclined to expect. There are a lot of easy mistakes to be made. Consider, for example, the diagram on the following page produced with the same
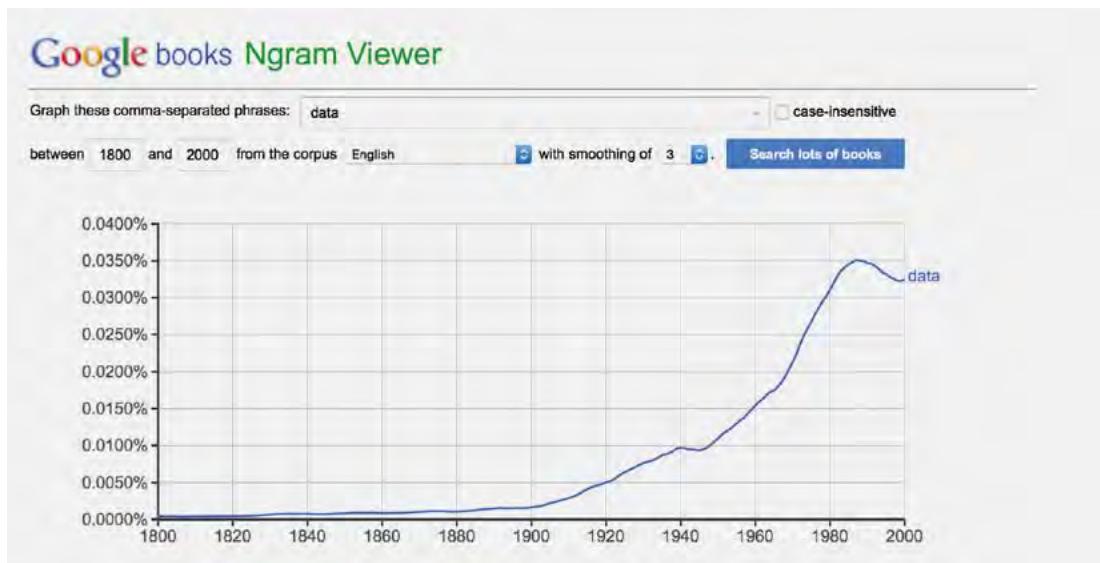
Image 1

Google tool, depicting the frequency of the term "atomic bombs" from 1800 to 2000 (see *Image 2*). The chart shows a massive usage spike around the end of World War II. This is followed by a substantial fall and then a kind of steady persistence up to the present. The result is so intuitive, it seems virtually unarguable: the first atomic bomb set off a panic, which soon settled into a generalized cultural anxiety. It's a great story. If only it were true. Factor in the additional term, "nuclear weapons," and the anxiety no longer levels off (see *Image 3*).

The term "data," too, turns out to be a good example for how tricky it can be to interpret big data such as that behind the Google Ngram Viewer in the cultural sphere. In the case of "data," the Ngram Viewer correctly identifies the moment when the concept "data" takes off as a subject of discussion in the general culture, yet it obscures the crucial early moments in the story of "data" in the seventeenth and eighteenth centuries, when "data" so-called first emerged as a term of intellectual importance.

TO BE FAIR, it is hard to blame Google for stumbling over the seventeenth- and eighteenth-century data on "data." "Data" is a funny term and very hard to search. One reason is that many digital resources, Google Books included, are not yet very good for the period before the nineteenth century. But there are others, too: not least of all, the presence of the word "data" in Latin, a language still used extensively in the early modern period. Careful examination of the sources clarifies why the real quantitative rise of the English word "data" in the seventeenth and eighteenth centuries does not show up in the Google Ngram: it is offset by the decline of Latin at the same time, resulting in a flat curve in the Ngram Viewer.

An excellent indicator of what Google's Ngram is missing may be found using a much older reference, the *Oxford English Dictionary.* But it would be a mistake to think that this simply reflects the virtues of old humanistic techniques in comparison with the data-driven approaches of today. A monument of pen-and-paper scholarship, the *OED* was nonetheless a highly novel project, remarkable even now. Today, we would call its approach "crowd sourcing": evidential quotations were contributed by ordinary readers, mailed to the *OED*'s editorial offices on paper slips, and filed in a purpose-built data collection center known as the *scriptorium,* where they were sorted and stored. From the *OED*, we learn that the term "data" emerged in English not in the 1940s but in the 1640s, and the origins of "data" as traced by the *OED* turn out to be surprising.

When it first entered English, "data" was less the province of the scientist than the priest. Consider the very first use of "data" cited by the *OED*, from a series of published letters between the prominent Anglican theologian, Henry Hammond, one-time chaplain to Charles I, and the Presbyterian controversialist, Francis Cheynell.

In the letters, Hammond defends the "set forms" of the Anglican liturgy against Cheynell's critique. In refuting Cheynell, Hammond paraphrases the tangle of theological propositions posited by his rival ("that there were an ordinary gift of Prayer and that to be stirred up and exercised, that Ministers should study to pray seasonably, . . . that he that hath not ordinary wisdom to pray as he ought, is not called by Christ to be a Minister of the Gospel" . . .) in order to dismiss them with a single stroke. Hammond writes, "Were, I say, all this granted to you, yet sure from all this heap of *data* (if they were *concessa* too) it would not follow that it was necessary . . . to abolish all set forms in the publique service of God."

In this first *OED* citation, "data" are stipulations, things taken for granted in an argument. Though he does not agree
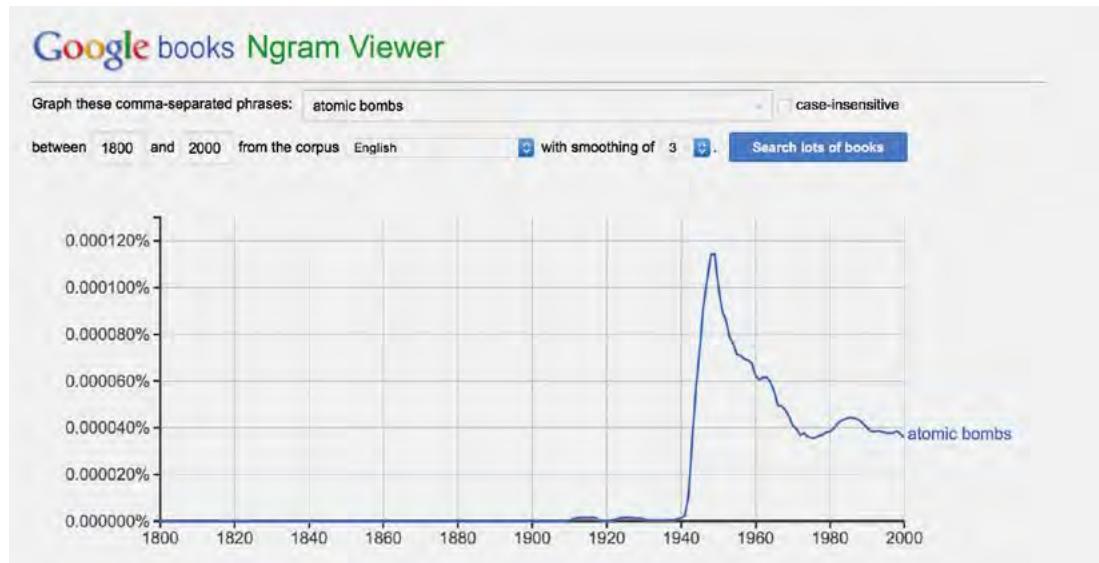
Image 2
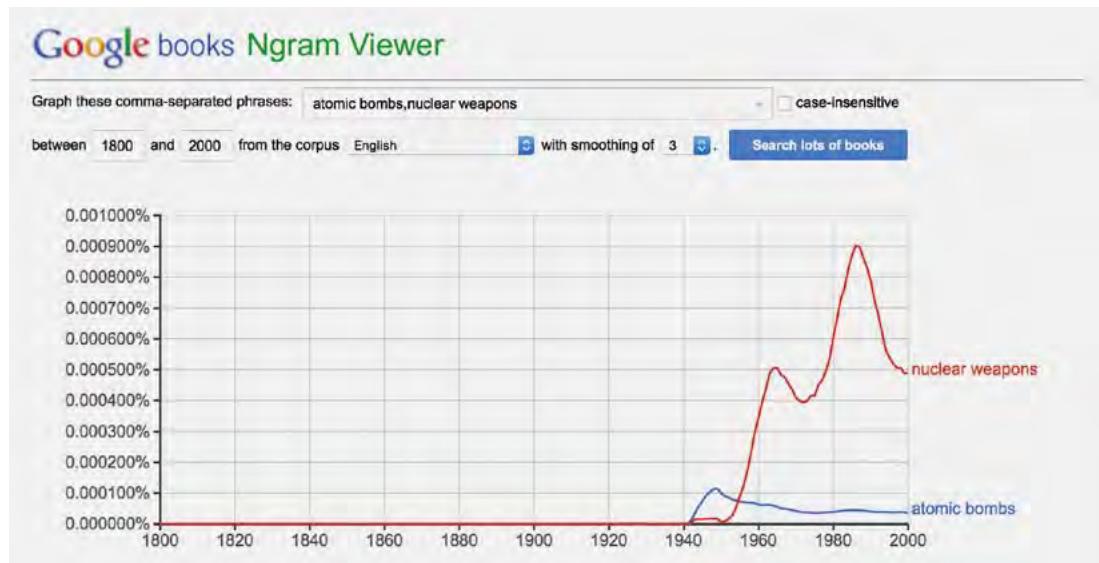
Image 3

with Cheynell's propositions, for the sake of argument, and, because they have no bearing on the larger matter at hand, Hammond *concedes* them. They are, as he says, both *data* and *concessa* . . . and a heaping helping, no less.

The notion that a theological proposition or directive might be called "data" feels strange today, but to Hammond and his contemporaries, it was not surprising in the least. In Latin, after all, the word "data" is nothing more than the plural of the neuter past particle of the verb *dare*, to give. For Hammond, "data," were "givens," facts, propositions, or principles, treated as matters beyond argument because they were true, as in the case of statements in the Bible, or because they were agreed upon for the sake of argument, as here. For an Oxford-educated clergyman steeped in

Latin learning, nothing was more natural than to call such givens "data."

For Hammond, "data" does not name one kind of *thing* or another. It simply identifies what is given. A parallel linguistic strategy was employed in mathematics in the same period. In math, one may posit values arbitrarily—let X = 3, and so forth. Such values, too, were known as "data." Here again, it is essential to note that calling something "data" says nothing whatever about its truth. To the contrary, the appellation "data" signals that the question of reference to the world is at least temporarily placed out of bounds. A math problem may well be inspired by facts in the world. The X above might be apples or oranges, but once we decide that X is "data," any question of counting actual fruit is off the table.

In a certain kind of situation, an early modern writer might well have accepted that his or her "data" were "facts," but such an argument would not have meant much one way or another, since the point of calling facts "data" was precisely to moot that question. And in a different kind of case, such as that of Hammond, where the "data" were merely "concessa" for the sake of this particular argument, the author would certainly have rejected the equivalence of "data" and "facts."

A century later, the same principles were still active, but typical uses of the word "data" were changing. This did not happen all at once. Take, for example, the 1761 pamphlet *Experimental Magnetism* by another Oxford-trained scholar, the long-forgotten Temple Henry Croker. In it, Croker makes the following intriguing statement: "Till Experimental Philosophy was introduced, All Science was founded upon Data."

Without some historical context, it is hard to understand what Croker could possibly have meant by this. In fact, from a modern perspective, Croker appears to have his terms exactly backwards. For him, the *abandonment* of "data" was a crucial and definitive step toward modern science. "Data" were not experimental facts; they were axioms given *prior* to experimental investigation. Further scientific advance, Croker writes, "must result, not from Fancy but from Facts, not from artfully devised Systems, but from real Experiments"—from real experiments and facts, not from "data."

Alas, Croker made no great contribution to the history of science. His research into perpetual motion foundered, as did less grandiose plans for a horizontal windmill. Yet his statement about data was no crank gesture. For him, as for many in his day, from John Wesley to Tobias Smollett, "data" still meant "givens," as it did in Latin, and as it did for Hammond and Cheynell in the previous century. But at the time Croker was writing, and as his own argument suggests, assumptions about what constituted givenness were themselves changing. Both the epistemological and the linguistic ground were shifting beneath Croker's feet.

A 1775 letter from Benjamin Franklin to his friend, the scientist and theologian Joseph Priestley, illuminates this point. Here, Franklin employs the term "data," with some irony, to describe an imaginary political calculus on whether or not to go to war. In suggesting that Britain reconsider its opposition to American independence, Franklin writes,

Tell our dear good friend [Richard Price], who sometimes has his doubts and despondencies about our firmness, that America is determined and unanimous; a very few tories and placemen excepted, who will probably soon export themselves.—Britain, at the expence of three millions, has killed 150 Yankies this campaign, which is £ 20,000 a head; and at Bunker's Hill she gained a mile of ground, half of which she lost again by our taking post on Ploughed Hill. During the same time 60,000 children have been born in America. From these data his mathematical head will easily calculate the time and expense necessary to kill us all and conquer our whole territory.

Franklin employs "data" to refer to quantitative facts gathered through observation and collection and subject to mathematical analysis, much as we do today. That Franklin might use "data" so casually suggests he took his usage to be transparent. What's more, even fifteen years earlier, when Croker was writing, it was already possible to poke fun at the pseudo-scientific way that people talked about "data" as in this social satire modeled on Laurence Sterne:

Sarah, now advanced to her seventy-sixth year, was, had she been stretched out to her utmost length about five feet three inches, honest measure; and as she was generally seen making an obtuse angle from her middle of about 95° 36', it will be easy for mathematicians to compute the length of the line, they will imagine to be extended from the tip of her coif to the toe of her shoe. But as this is a matter of science, out of my reach, I can but shew my good will by assigning these data, little doubting that my second edition of this third volume will contain the calculation at length to one millionth part of an hair's breadth.

For the author, John Carr, "data" conjures empirical, quantitative science in both its usual practice and its excess—the beachhead of the calculator in the fields of social life. From the middle of the century, Croker's usage was waning, and a modern sense was catching on.

"DATA" MAY ALSO BE "facts," but by using the term "data" we are putting them in a specific rhetorical light, accepting them as stipulated. When we use "facts," we are placing emphasis elsewhere, as etymology suggests. In contrast to "data," from *dare*, "to give," "fact" is from the Latin verb *facere*, meaning "to make" or "to do." Thus, when we call something a fact, we emphasize that it truly exists. In a certain kind of argument, "facts" are likely also to be treated as "givens" or "data." In another kind of argument, in algebra for example, "givens" may just as well be arbitrary. What unites these cases, what makes data "data," is not existential truth but status as an accepted premise for argument. Moreover, as often as not, in the early modern period, facts and data were framed as contraries. (In our age of "big data," this possibility feels arrestingly prescient.)

Ironically, with the rise of empiricism in the eighteenth century, the terminological waters grew cloudier. The term "data" grew in importance. It was employed in more arenas, and the fields of mathematics and theology accounted for an ever smaller fraction of total uses. At the same time, "data" came more often to be used in the sense of raw, unprocessed information. As "data" came to be regularly employed in empirical fields such as medicine, finance, natural history, and geography, it became usual to think that "data" could be the result of an investigation, not only its premise. Broadly speaking, this association held for the next century and a half.
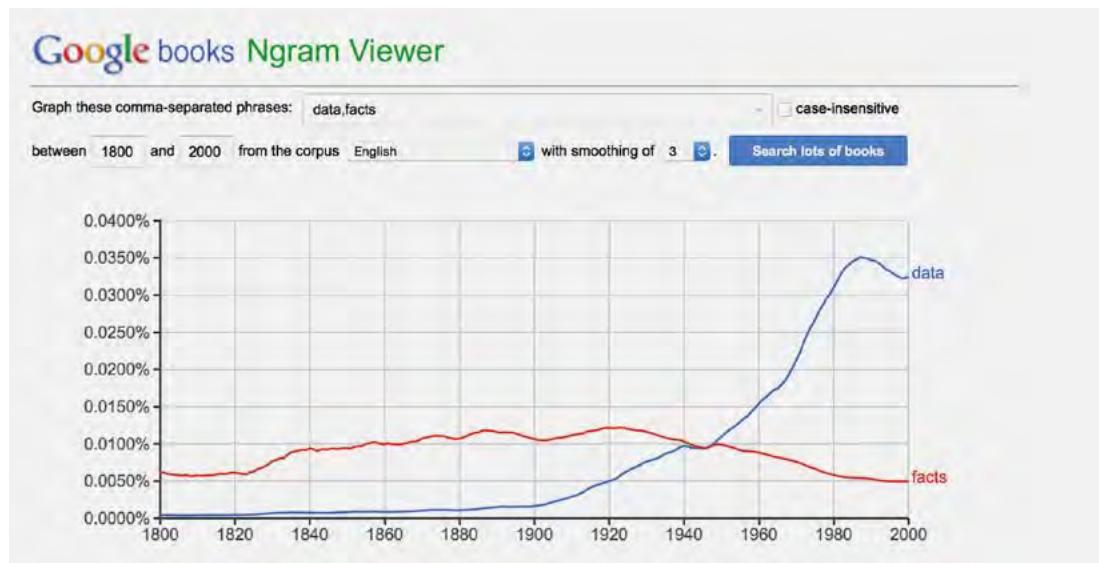
And then something changed again.

Image 4

With the emergence of electronic computing, a new terminological need arose. Just as in the seventeenth century, in the second half of the twentieth, it became important to distinguish between facts and givens. This second time around, some term was needed to name the values upon which we calculate, independent of the question of what they represent. Some term was needed to name the stuff that computers work on (see *Image 4*).

Like the first transformations in the term "data" when it came out of Latin, this more recent change is hard to perceive from the simple quantitative data on language alone—what linguists refer to as the "bag of words." In the word counts produced from Google Books and other corpus-based resources, the history of "data" looks like one big explosion starting in the middle of the twentieth century, cresting around its end. Of course, that's right from one perspective: we live in an age of data, both big and personal. And it is no accident that the word "data" shows up so frequently in our literature. What this quantitative account misses is the way in which the application of "data" changed during this same period.

Yes, in strictly quantitative terms, "data" mattered more in the nineteenth century than in the eighteenth, more in the twentieth than the nineteenth, and, toward the end of the twentieth century, more than ever before. But, in the realm of usage, the story is a bit more back-to-the-future than onward-and-upward. That is to say, the *ways* we use "data" now hark back all the way to the days of Henry Hammond.

AS HAMMOND'S USAGE SUGGESTS, from the beginning, "data" was a rhetorical concept. "Data" means today, as it always has, that which is given. As a consequence, for three centuries, the term has served as a kind of historical and epistemological mirror, showing us what we take for granted. Without changing meaning, "data" has repeatedly changed referent. It went from being reflexively associated with things outside of any possible process of discovery to the very paradigm of what one seeks through experiment and observation. It changed referent again in our contemporary period when it came to be associated with quantified information structured, stored, and communicated by computer.

This most recent change laid the linguistic groundwork for a wide range of now-ubiquitous uses such as "personal data," "big data," and the like. But we should be clear: from the point of view of our everyday language, this recent explosion of "data" is only a revolution in that older, classical sense of the term, as a circling back whence we came. And our understanding of how "data" works in our language and culture may benefit from this perspective.

"Data" matters enormously in our world and the ways we talk about it. It is ubiquitous and powerful. For this reason, it is tempting to imagine that "data" is also new. From the point of view of artifacts—mortality tables, account books, temperature records, and the like—we would do well to take a longer perspective. This is true, too, for language. Here, a little history, and indeed a little data, taken with the correct dose of salt, may clarify matters and put them in a different light.

It is tempting to want to discover the essence of "data," to determine exactly what kind of fact it is. But this misses the most important reason why the term "data" has proven useful in so many areas of our contemporary culture. "Data" first emerged as a tool for setting aside questions of ontology. It re-emerged at the center of our general culture as it produced ontologies of its own. □

CAN WE SAVE THE INTERNET?

The following is an excerpt from a panel discussion held at the European School of Management and Technology on January 16, 2015, on the occasion of the German publication of Andrew Keen's *The Internet Is Not the Answer* (as *Das digitale Debakel*), in cooperation with the German Foreign Office and Deutsche Verlags-Anstalt. In addition to the entrepreneur, writer, and broadcaster **Andrew Keen**, the panel also included **Norbert Riedel**, Commissioner for International Cyber Policy for Germany's Federal Foreign Office, **Sandro Gaycken**, Senior Researcher on Cybersecurity at the European School of Management and Technology in Berlin, and **Christoph von Marschall**, Chief Diplomatic Correspondent for the German daily *Der Tagesspiegel*.

Norbert Riedel: The Internet transcends borders, and that's why it is an issue for foreign policy, which is why it is of interest to me. I find that people are worried about two different things: on the one hand, there is a fear of an omnipotent state—Big Data leading to Big Brother. I think the state has an important role in Internet governance, but there is one precondition, and that is trust. Unfortunately, because of the revelations of Edward Snowden, there has been an erosion of trust. But governments and states, together with all stakeholders—with citizens, with private companies, with science, with international partners—have to make sure that there is Internet governance. On the other hand, I also sense that the public feels that the power of states and governments is limited. Searching for a restaurant on your iPhone, or buying a book online, you have the feeling that Big Brother is watching you, and you're wondering, Who really makes the rules? Is it the state or the big companies? I think this is quite an important discussion. As Andrew Keen described in

his book, there are different discussions about privacy here in Germany and in the US. Bringing these debates together is the goal of the so-called "Transatlantic Cyber Dialogue" that German Foreign Minister Frank-Walter Steinmeier and US Secretary of State John Kerry initiated in 2014.

Christoph von Marschall: Sandro Gaycken, how do you see the net positives and net negatives of the Internet? What's the balance?

Sandro Gaycken: I think it is still too early to tell whether it is a failure or not. What we are witnessing now is a typical historical process, in a way. If you look at technologies of the past, with the bigger ones, like industrialization, you always see that there is an early phase where technology optimists, inventors, and entrepreneurs have these great ideas about technologies that can change the world. With industrialization, the promise was to free us all from labor and from poverty. So they start building this machinery, and it gains traction, if it's useful. And then you need more money, so big companies come in and investors come in with their own set of interests. Once this technology starts spreading and becoming more accessible and available to everybody, everyone starts tinkering around with it. That is what changes technology.

We're in a process now where we are seeing a break with this strongly utopian phase of the Internet, where everyone thought it was great, it would make us richer, and make us all free, create one global community of peaceful, loving people. I grew up with this community, so I know these utopian ideas very well. This is all being changed because there are so many interests involved, which is changing the whole paradigm. There is a lot of interest in state surveillance, for example—in the whole Arab region, China, Russia—where the Internet is being turned into a machine of control and propaganda. There are a lot of problems with industrial espionage via the Internet in Europe. So, quite a few of these utopian ideas are being turned around because there are more players, because the whole technology has become broader and more widespread, and there are so many more people using it. But I think this is just an in-between step. From a historical perspective, it takes something like 20 or 25 years for a technology to mature.

Von Marschall: What are the special threats or challenges? It seems there are certain distinctions—not only inherent in the questions "What is the threat?" or "Who is the enemy?" or "Who is misusing it?"—but also in a fourth question: "What is the solution?" Andrew Keen writes that there is a role for the government. But he doesn't say the government is the enemy, the problem, or the threat. He says, rather, that what the free economy is doing to the Internet might be a threat to our

societal well-being. When I look to the German discussion, it's mainly that government is a threat, or, rather, governments are the threat. If it is not our government, then it is the governments that are spying on us, and so on. It's interesting that this is mainly an accusation leveled at the United States, and the question of what Russia or China does is curiously absent.

So, with that as a background, from your perspective, when you are dealing with threats and challenges, what is uppermost on your mind?

Riedel: Before I address the threats, let me just say one thing about the positives. We have a Digital Agenda in the German government and we also have one in the European Commission, because we believe that the Internet and the digital revolution is creating jobs and bringing economic growth. So, this is perceived positively. But there are, as you say, a lot of challenges and risks—and, in my line of work, we start with the issue of privacy. That is one of the outcomes of the Snowden revelations. We have to make sure that we also have privacy on the Internet. As we say in the government, human rights must be protected online as well as offline. This is a challenge because the Internet is a new field of policy.

On the other hand, as Sandro Gaycken mentioned, we have cyber-criminality, cyber-spying, cyber-sabotage, and even maybe the problem of cyber-warfare. So, from my point of view, the Internet is neutral, but like in the real world, you can have bad as well as good come out of something neutral; the Internet can be used for everything and anything bad. This is a challenge, because this represents a field of new risks—and perhaps we are lagging behind—because I also think that between states and governments we need regulations and standards and rules. We can use the existing rules, but they were invented without the knowledge of the Internet.

Von Marschall: In your day-to-day work, you seem primarily concerned with the threats to privacy presented by governments or state actors rather than by new corporate monopolies.

Riedel: No, look, even if there's an erosion of trust between countries, we still always need each other. But it's not only about states and governments; it's also about big enterprises.

It's worrying, because we have our own society, our own social system, but now from Silicon Valley there is a wave, and we don't have an answer. There is a reason why in Germany we don't have Amazon, Facebook, or Google. The only big German enterprise is SAP, but that's totally different. So the question for the German government is: Who makes the rules? How should we answer the challenge? Just as an example, this is why Google is such a big issue in Brussels. Can we find a

solution in anti-trust law? So, yes, these companies are a concern.

Von Marschall: I'm sure we'll come to that later, whether we should have a European consensus or not, but, first, I'd like to pose the same question to you, Sandro. From your perspective, what are the threats, what are the challenges, what would you recommend we deal with?

Gaycken: Well, I come from the warfare arena, the espionage arena. But while we're in this phase of transition from a highly utopian stage to a more realistic stage, the most dominant threats right now are the appearance of surveillance states—and I don't mean the US and the NSA, but much more Russia, China, and the whole Middle Eastern and North African countries. These countries are really using this tool in a very bad way. So that's a very big concern. So too, of course, is everything you can do in cyber-warfare and cyber-espionage, because there is a lot you can do, and there are a lot of states who are interested in carrying it out. We're seeing a global surge in activities and campaigns directed mainly against Europe and the United States. A lot of the industrial espionage attacks are directed against Germany, and that is a systemic and strategic threat to us, to our societies, as much as it is to our economic and political systems.

Von Marschall: So let's jump to the fourth question: Where are the solutions? Can we save the Internet and, if we can save it, where do we start?

Gaycken: I think we can, actually. We've been working on trying to come up with a couple of solutions, especially now in Germany, with this whole new paradigm of Industry 4.0—the smart factory. That's actually an area where Germany is becoming quite prominent in the whole IT world, which has never really been the case, apart from SAP. Now the machine world meets the IT world, and they're both getting together. German companies, at least in a lot of the industries I'm talking to, are trying very hard to understand this, to wrap their minds around it. They are trying to bring some German engineering perspectives and values relating to data protection to this world. They have to first sell it on the German market, of course. But that, in itself, is the nucleus of a little change in this field, at least.

It's not as fast as the Silicon Valley stuff; it does not have as much money as Silicon Valley, to be sure, and the whole pattern of innovation in the Valley is different. You have a good idea and you go to one of these investor guys, and he gives you ten million dollars and calls you back in two years. In Germany, when you have a good idea you have to go through cycles and cycles and cycles of justification and complicated processes for getting money. That takes a bit longer—a lot longer, actually—and is much more critical and much

more complex, but the outcome is much better. Our fail-rate is much lower, so maybe this different model of value-sensitive, slow, critical, cautious innovation and evolution has a chance, now that Silicon Valley is sort of failing in some respects, and people around the world are seeing that it is not good for them and that they need something new.

Von Marschall: Norbert, to you: Can we save it? And where do we start?

Riedel: First of all, the Internet needs governance, and this is not a task only for governments. We need all the stakeholders involved. We also need standards, and that's what we are doing in the United Nations as well as in the EU. We want to find consensus in governance: what is allowed, what is not allowed, what we should do, and what we should not do—espionage, for example. There is also another argument involving sovereignty. If we are not happy about what is happening, we have to find our own solutions. Sandro Gaycken mentioned the Internet of Things, or Industry 4.0, but it may be about becoming more independent from big companies coming from the US or elsewhere. This has nothing to do with protectionism; it is just a reaction to what is happening.

Von Marschall: European policy, which you deal with every day, must be very difficult, since, as you said, we are not able to find consensus inside the European Union. Even with regard to privacy, the British and the French have a very different approach to that than we Germans do—at least the public perception is that they have very different approaches. How does this difference affect your day-to-day business? Do we have consensus in Europe?

Riedel: We have made a big step forward in Germany and within the European Commission with the Digital Agenda. We are working on this and on data protection. I am sure we will have a solution in Europe this year. This is very important to bring the digital market forward. So, yes, it is difficult to find a common solution in Europe, but in the end it always works, it always comes to that. I am quite confident.

Von Marschall: Andrew Keen, your comments?

Andrew Keen: Yes. You brought up the trust issue a little while ago. People always talk about the "trust economy." And what you have with the Internet is the disintermediation of traditional authority, the doing-away with gatekeepers, the idea that somehow trust would naturally form. I think that one of the cultural challenges of the Internet is that—and this is why this is sort of grand historical narrative—we have the undermining of the traditional institutions, traditional professions:

journalism, for example, teachers, lawyers, accountants, doctors. They are all challenged by this new world. But one of the great victims of this new world is trust. No one trusts anything. We live increasingly in a culture of paranoia, a culture dominated increasingly more by extreme conspiracy theories—perhaps considerably more in America than here in Europe. The Internet has not created that paranoia or those conspiracy theories, but it's contributing to them. So as you have this disintermediation of the traditional authorities of the twentieth century—as journalists, for example, have less authority and as everyone becomes more reliant on their own social network—we have firstly a culture where we only trust people we agree with in the first place, and secondly you increasingly have this fragmented, atomized, alienated culture. All we are left with is the self, or perhaps the selfie.

Ironically enough, everyone also always talks about the "attention economy," but the other casualty in this world is attention. This is a great audience. Most of you are actually listening to what we're saying. You're not tweeting; you're not on your computers. If we were in America, especially in Silicon Valley, people would be on their phones, they'd be networking. One of the cultural consequences of this is a tyranny of the present, a tyranny of the now. Jaron Lanier famously said, "I miss the future." I agree; I miss the future, too. But I also miss the past. Alongside the economic and political problems of the Internet is the cultural problem of the endless now, this tyranny of the moment. The mob runs from Twitter outrage to Twitter outrage, and no one is able to concentrate on anything—a casualty of attention and trust. ☐

[FROM THE PALO ALTO SESSIONS]

by Joshua Cohen

The following excerpt, from the forthcoming novel *Book of Numbers* (Random House, June 2015), is a satirical excerpt from the dictated memoirs of "the founder of Tetration, the world's most successful online search engine."

IT was as like a dream. Or hallucination. As like when the comp digirecorder shuts off when its condenser mic does not detect our speaking voice for 1, 2, 3, 4 seconds and so the recording will become nothing but an artificially compressed memory omitting the time in which life is lived, the times of blankness between the redlit *sesshs* just lost and irretrievable. That is how we perceive that existence today, as like a vast unrecorded emptiness. We were not sleeping and not awake. We were convinced that we were writing everything wrong and had gotten everything uncombobulated, that we were writing the algy as like it were the businessplan, and writing the businessplan as like it were the algy. The algy a sequence of specific commands executing specific operations, the bplan a sequence of nonspecific goals and objectives or just subjective projections that would execute only if we failed to convince the VCs, or worse, if we succeeded at failing them totally. The algy used sequences of numbers to represent functions, the bplan used sequences of letters to represent the dysfunctionality of its intended readership, manipulating prospective investors according to sociocultural filters and career trajectories, levels of greed and their enabling inadequacies, significant degrees of gullibility too, or just plain unadulterated stupeyness.

WE HAD SET A FULL FUNCTIONALITY deadline of September 1996 but we were behind schedule by April so we revised for December, but then it was May and we were behind the revised schedule. If stage 2 completion was unfeasible we would redefine and make that completion stage 1 so that everything was feasible. The aim was not to be workable. Not to be presentable. But to achieve seamless genius, no raphe. Only the rec investors say done is better than perfect. The techs say perfect is better than done. We were blessed, in that we had no rec investors and were the tech itself. We were always prodding, nudging one another subtle with our fists. Cull would say, "C*nts do not drip on deadline." Qui would say, "It is too difficult to coordinate the squirts." We talked as like this even with the girls around, and the girls were always around, The Friends of the Trapezzi Sisters nerfing it up and tossing the frisbee indoors and the only way to get rid of them was to send them

out on errands, or if they had a date. "No that is not the correct surge protector, and no we do not have exact change." Qui and Cull asked all of them out and the answer was, "But you never change your pants."

Never. We shared even the undies, just took what was folded atop the unit washer/dryer. We were all the same size back then. Fruit of the Loom was the best for extended sedation. No socks. Raffaella cooked but if she ever went aggro against our herbivorism and tried to convert us to sausage we sent The Friends of the Trapezzi Sisters to forage. Cull and Qui both ordered Greek salads but Egyptian Fuel was a mile closer, though OrganoMex had faster response times despite being 2.2 miles farther away. Smoothies were the optimum delivery system but we were never quite satisfied with our formulas for determining whether the time it took for us to make them was more or less precious than the money it cost to order them and anyway Raffaella did not have a blender. Qui and Cull stopped driving back approx twice a week to San Francisco but still had to drive approx once a week to Stanford whenever our testsite would crash its servers and no one else could fix them or could apologize both so well and disingenuously. To make up the time Cull would ignore stopsigns and stoplights and Qui would ignore even the roads and once drove straight out of the parkinglot and through the condo quad and ruined the sprinkler system and so had to waste a weekend helping Super Sal and Ronnie G dig up the heads and replace them. We were so fritzed that once when we had to go to Stanford ourselves to tender our regrets for once again crashing their servers and to try and retrieve the latest corrupted version of their financial aid site, we forget because we were passed out whether it was Qui or Cull driving the car, but one of them was passed out with us and the other got lost in Monta Loma or Castro City and sleepdrove instead to the old apartment they shared in the Mission and even sleepwent to the door but the key he had did not work and the new tenants woke us up by giving us directions with a crowbar. For models of how best to present this period consult any national intelligence whitepaper on the behaviors of terrorist cells or besieged messianic cults.

Still, the hours were no longer than at any other startup. The hours were no longer than life. Cull and Qui would code and crash and then we would recode until crashing. We would work on it as like online would work on us, which meant perpetually. In the beginning it was a site, and then it was a program to be embedded in other sites, and then it was a program to be tabbed in a browser. But would we license it. Or sell it outright. Or just diversify it all as like our own company. Which would require which systems. Requiring funding of what amount and engineering by whom. Was search even patentable. How to recognize a question. The appropriate time to incorporate. How to recognize an answer. We had a title but no name. We were the founding architect of nothing.

We kept failing, our own computers kept crashing and kept crashing the servers at Stanford and then Stanford threatened to banish us from the servers but Qui and Cull appealed to Professor [?] Winhrad, who intercessed, and then we failed again and lost some of their admin and even some faculty email and then they threatened us again and Cull and Qui appealed again and Professor [?] Winhrad intercessed again and then they put us on probation, gave us a second chance squared, after which, hasta la vista, baby.

WE had a problem but it was not us and yet neither were we the solution. Our problem was time and not because we did not have enough but because we had too much of space.

We had so much of this space and all of it kept growing but by the time we could crawl even a portion of it everything had grown again so that we could not have kept up even by walking or running. But that is not how to understand it.

If the internet is the hardware and the web is the software

If the net is the mind and the web is the body or the software the body and the hardware the mind

Think about it as like knots. Shoelaces. If you tie them but the knot is no good you can either tie another knot atop it or just undo it all and start over. But if you have never experienced a good knot in your life all you can do is do the both of them. Tie another knot and start over. Or think about it as like shaving your face. If you use a razor you might miss a hair or not cut it completely but if you use a tweezers and tweeze each hair you can bald your face to even the follicles. But then the rash. You cannot do both. Forget it. Or as like losing a wallet. You can retrace your steps or you can, forget it. Or as like losing a button. You can either retrace your steps and try and find it or you can just sew on a fresh one. But to do both you have to have two broken shirts or two broken pants and the needle, the thread. You have to realize the order. People wrapped themselves in skins that fell off them before they invented a needle and thread to sew them better before they invented a button device to clinch them better, and all the fits just worked. But imagine if everything was the reverse and you had to invent a clincher before inventing the equipment to sew an animal skin before even inventing the animal. That was search invented by how to search. Invented by how to tailor the results to the user. Not to mention that "button," in another context, could refer not to a clothes clasp but to a key pressed to launch a weapon. Not to mention that in still other contexts "needle" could mean "annoy," or "bother," and "thread" might not be a literal string or twine but figurative as like a "drift" or "stream" whose speed is measured in "knots," "a train of thought" just "flowing," until it was "brought to heel." The choice was to both needle the thread and thread the needle. Through its eye. In one ear, out the other. To know the polysemy of tongues. We had to code a searchengine to check our own code for a searchengine. That should tell you everything.

Or better, understand this by what we are, by what we have postulated as like our axiomatic expression. Separate, divide. Categories, classifications, types. Genus, species.

Clades. It is history, it is historical. The world was discovered, the world was explored, and it was all so round and immense that it confused us. We reacted by formalizing ourselves into becoming botanists, zoologists, and so the plants and animals became formalized too, the botanists and zoologists arranged them. But they arranged them by how they looked, how they sounded, where they lived, when they lived, by character. How our humanity, taxonomized at the top of the pyramid or tree, perceived them. But then the universe that could not be seen and could not be heard was discovered and explored. Cells were observed. Mitochondria. Genes. DNA. It appeared that not all the animals and plants were as like they appeared. A whale was biologically closer to a panda than to a herring. Turtles were biologically different than tortoises but they both were closer to being ostriches than snakes.

Point is, what was important was not the organism itself but the connections among the organisms. The algy had to make the connections. We figgered if we could index all the tech links, and apply to each a rec link, whatever terminology we mortally employ, we could engineer the ultimate. The connection of connections.

How a single user regarded a thing would be comptrasted by what things existed. Not only that but the comptrasting of the two would be automated. Each time each user typed out a word and searched and clicked for what to find, the algy would be educated. We let the algy let its users educate themselves. So it would learn, so its users would be taught. All human language could be determined through this medium, which could not be expressed in any human language, and that was its perfection. The more a thing was clicked, the more perfect that thing would be. We would equate ourselves with that.

Now let us propose that everyone out of some psychosis suddenly tetrated for "mouse," but chose results pertaining only to "device for menu traversal and interface," or if everyone tetrated for "rat," but chose results pertaining only to "snitching to the authorities." Auxiliary metonymic or synecdochic meanings would become primary, while the displaced primaries might have their meanings reinvested in alternative terms.

It took approx millions of speakers and thousands of writers over hundreds of years in tens of countries to semantically switch "invest" from its original sense, which was "to confer power on a person through clothing." Now online it would take something as like one hundred thousand nonacademic and even nonpartisan people in pajamas approx four centiseconds each between checking their stocks to switch it back.

The connection is basically the point. Or the motion between two points is the connection. Basically nothing exists except in motion. Nothing exists unless transitive, transactional. Unless it joins. Unless its function is its bridging.

This is what we meant by mentioning the blankspots on the recordings, the empties. The gaps, the missing gaps. What is omitted from our recordings is all that links. Relations. □

FEATURES

Anthony McCall: *Fire Cycles III* (1974).
Performance View.

REN THE DRIVER

by Tom Drury

This short story is from the author's novel-in-progress, part of his project while living and working at the American Academy this spring.

FOR NINE YEARS Ren had a job driving up and down the East Coast, delivering cars to seaports and dealers and private buyers. His apartment and his bosses were in Massachusetts, but he was usually somewhere else. The job had an undercover feeling to it that suited his nature, but one summer it ended.

Ren was driving a bronze two-door Volvo, known as a shooting brake, down to a man in Key West, when a long piece of rusted ductwork fell off a truck and struck the Volvo, sending it rolling down an embankment beside the Overseas Highway.

This happened incredibly fast, and Ren had no idea what was going on. He saw streaks of light on dark, though it was daylight, and he heard bells and bangs and woke some time later in a mangrove swamp at the foot of a hill. Deep pain suggested he might have lost a leg, but when he looked they were both there. The shooting brake was a ways off, upside down and mashed, with the door broken open and smoke rising here and there from the chassis, campfires in a metal village.

In time an ambulance came, and the medical workers gathered around the fallen Ren in papery teal scrubs and white shoes.

"What is your name?"

"Warren England," said Ren.

"What day is it?"

"Mmm, Tuesday."

"Who is the governor?"

"I don't know," said Ren. "I'm not from here."

The ambulance people strapped Ren on a board and carried him up the slope to the highway and drove him to a hospital, where he would stay for three days. He had a concussion, a sprained wrist, and torn knee ligaments. Compared to the Volvo, he was actually in pretty good shape. The accident had not been his fault, but he ended up losing his job anyway, as the Key West man really wanted that car.

Ren stayed in a resort on Key Largo until he could walk without crutches. One day he went to the lounge by the tennis courts, where a breeze drifted down the bar like a ghost. Ren wore island clothes and a knee brace and sat watching tennis. Today was his birthday—he would turn 34 at sundown.

Running backward in the hard sunlight, a tennis player hit her return into the net, losing the set, and she pounded her racket on the blue court until the frame came apart and the strings fell in. Ren felt embarrassed by the violence to the racket, as if he himself had done something wrong, and he decided then that he would go home—not to Somerville but to South Dakota and the town where he grew up.

IN LE PAGE, SOUTH DAKOTA, the bus driver took the passengers' luggage from the hold with the customary sorrow of his occupation. Ren figured maybe he'd once wanted to be an airline pilot, who handles no luggage except his own small roller.

Ren had ridden the bus for days, and he felt flexible as a gymnast to be off, with no plans to ever get back on. He dropped his suitcase on the sidewalk and swung his arms in their sockets. His shoulders cracked and his hands shook and his ears rang, so he wasn't really in top gymnast form. His hearing had never been good, and he thought that when he was old, he would be deaf.

It was around six o'clock at night, with the sunlight on the roofs of the town. The Le Page River flowed velvet green, as always, due to the algae that grew in the water. People came to see the river and the leaves in the fall. The new marquee on the old theater said that the movie *Whale Rider* was playing.

Ren walked down the main street to the town's hardware store, which his friend Kernan had inherited from his parents. Kernan greeted Ren and closed the store, and they went to the back room and sat on a davenport drinking Leinenkugels.

Ren and Kernan had run around together in high school, and they talked about one summer night from that time. They'd gone to a party at an abandoned farm, where people were making a bonfire from the furniture and woodwork of the farmhouse. Someone heaved a door onto the fire, making a gust of sparks and flames.

And then a cornet player from the Le Page marching band took a corsage from the wrist of a girl and tossed that into the bonfire as well.

Being drunk and courtly, Ren walked into the fire and picked up the flowers. They were not burned, and neither was Ren. And no one could figure out how that was possible. With a showy bow he gave the corsage back to the girl.

Now, later that same night, Kernan and Ren drove to a different abandoned farmhouse and sat in Kernan's car by the storm cellar, smoking grass and listening to the book *Moby Dick* on tape. It was the part where Ahab is pouring grog for the harpoon throwers and needling Starbuck. And just then a sheriff's cruiser zipped in behind Kernan's car with the blue lights going around.

"Now what," said Kernan.

The cops walked up to the windows with their hands on their belts, the way they do. They must have noticed the smoke. They might have inhaled it for all Ren knew. But luckily they were after someone who'd broken into a house, and they only wanted Kernan and Ren to open the trunk to prove that they were not the burglars, which they did very readily. The cops wished them a good night and left the farmyard in a hurry.

"That's just not the kind of thing that would happen today," Ren said.

"You only like that story because you're the hero."

"Oh right. All those nice farm things we burned."

"We were terrible."

"A curse upon the land," said Ren.

"All that's a long time ago, though," said Kernan. "Le Page is getting bigger and better. We have the gelatin factory, and we have the fireworks warehouse, and the airport, and the district courts. And people listen to me, believe it or not, I'm not sure why. They think they're doing what they want, but really they're doing what I want. So if you need something, just ask me."

"Place to stay," said Ren.

Kernan dropped Ren off at the Treeline Cabins on the highway outside of town. The cabin that Ren took was very comfortable, with beadboard walls and dog-shaped table lamp and green-plaid bedspread. Ren put his suitcase in the corner of the room and lay down on the bed and didn't dream anything and woke up at a quarter to ten. He took his pills in the bathroom and walked out in the rain to the Lamplighter Tavern down the road. And there he sat drinking a mojito and watching a Cardinals game on TV. A waitress dropped a glass, and the customers came alive at the sound of breaking.

After half an hour a woman named Maisie Cole came in wearing high boots and a rough suede skirt and a green slicker that she shook out and hung on a peg by the door. Maisie had been an athletic star in high school, throwing the discus and running the hurdles. She looked more or less the same to Ren, with long brown hair and narrow shoulders, as she came over and sat at the bar.

Maisie asked the bartender China Peterson for a Stone Fence, and Ren watched as China cocked her head while listening to the sandy sound of rum and hard cider and crushed ice mixing in a chrome shaker.

"So what have you been doing?" said Maisie.

"Driving."

"Are you married?"

Ren shook his head.

"I am," she said. "To Dave Farmer."

"Oh yeah, how is he?"

"Good," said Maisie.

China Peterson poured the Stone Fence into a martini glass and tossed in a mint leaf, and Maisie lowered her mouth to the rim and drank. Then she looked at Ren and rested her cheek on the palm of her hand.

"Well, no," she said. "Dave is not good. I don't even know why I said that. We're separated. I'm living with my sister. And, well, I don't know how much I should tell you."

"That's all right."

"I mean, everyone knows."

"I don't need to."

"He tried to kill himself, Ren."

"I do wish you hadn't told me."

"Life is a sad thing."

"I guess."

"I didn't used to know that, but now I do," said Maisie.

"Still."

Maisie had large brown eyes and a small, heart-shaped mouth. Some used to say she looked like an alien, but her face had always made Ren's heart beat harder. He raised the mojito quickly so she wouldn't see the shaking of his hand.

"Weren't you and Dave friends?" she said.

"We were arrested once, yeah," said Ren. "Broke into the roller rink after hours."

"Why?"

"Just to skate."

"Is that a crime?"

"The breaking-in is."

"You should go see him," said Maisie.

"Oh, I'm sure I will."

"How about tonight?"

"I just got here," said Ren.

"I've got to go out there and get something anyway," Maisie said. "Come with me."

Ren thought how he could just as well stay in the tavern until they turned the lights down and swept everyone out onto the street.

"Where does he live?" he said.

MAISIE DROVE A DODGE Ram pickup through the rain, and they rode out of town listening to opera music on the radio. The soprano flew to high notes like a devastated bird, and the announcer gave the song titles very softly, as if speaking to someone with a bad temper. *And that was Berlioz's "Burning Flame of Love," Consuela Rubio and Orchestre Lamoureux, Igor Markevitch conducting . . .* The gas station and the fortune teller were the only places open this late in Le Page.

"Dave had a girlfriend," said Maisie. "That's why I left him. I mean, I had to. They weren't careful. People knew. I knew. One time they were in our house and I saw them through the window. Just watching TV. She had her legs folded under her. In my own house. They were sharing a blanket over their shoulders. Watching a channel we never watched. And I felt like someone who was not me."

The road to Dave Farmer's house got smaller and smaller. Pavement gave way to cinders then dirt and the branches of a single birch tree moved in the wind and the rain. What had seemed reasonable over drinks in the tavern seemed straight foolish in the country. It was not like Farmer and Ren had been best friends. Yes, they had thrown the football in the empty street, and they had got arrested together, but in senior year Farmer had turned against Ren over a bet they made on ice skaters in the Winter Olympics.

"I don't get what's happened here," said Ren.

"I'm telling you," said Maisie.

"Kernan talks like somebody in the Lions Club, Farmer tries to kill himself, and you . . ."

"I'm pretty sure Kernan *is* in the Lions Club."

"I just kind of thought everything would be the same."

"Gee, Warren, we're not some dream you're having."

"That's true," he said.

"We have actual lives."

"It's my fault."

"It is your fault," she said. "And me what?"

"What?"

"You said 'and you.'"

"Oh," Ren said. "It's just you always had such confidence. Winning every race. Cooling-off laughing. Skinny Maisie. Hands in the pockets of your sweatshirt."

"Well, my stride would get weird if somebody kept up with me," she said. "Although I have to admit not many could keep up with me. What drugs are you on?"

"Nothing illegal," said Ren. "Venlafaxine. A little Trazadone at night."

Maisie pulled the truck over and took Ren by the wrists, holding his hands up in the dim orange light of the cab. Wet leaves spiraled down the lane and pasted themselves to the windshield. She closed her big eyes and leaned in to kiss his hands. First one then the other. Kisses of ceremony.

"You're home, Ren," she said.

MUSIC CAME MUFFLED from inside the house. Farmer opened the door and let Maisie and Ren in. He wore a green and yellow Packers jersey with the sleeves pushed up showing the red scars on his wrists. Perhaps it was a point of honor with him not to cover them. Up till then Ren had not really believed that Farmer had tried to kill himself, because who knew what would happen after that? Yet Farmer seemed to be in a good mood. He had an old-fashioned turntable and Large Advents and he played the records loud.

When you're rocked on the ocean, rocked up and down, don't worry . . .

Sensitive to the music and the medications, Ren felt the faint stitch of tears in his eyes. Linda Thompson might have been singing about Farmer and Maisie and Ren, though in this house—once Farmer and Maisie's, now just Farmer's—Ren felt like a bolt rolling on the floor after something complicated is assembled. And then Farmer put on "Knock on Wood" by Amii Stewart, and the sadness disappeared.

Farmer made horseradish vodka; he said it took him three weeks to make, and they poured shots from a Mason jar and danced on a threadbare Persian carpet. At the kitchen table they played five-card stud for matchsticks. They had captured that high-school mood in the little house, though there was something that didn't feel quite right. Once Ren caught Farmer looking at him with wary eyes, as if he thought Ren might try to collect on their old speed-skating bet, but then Ren told him about the accident in the Keys, and Farmer seemed more peaceful for having heard about that.

Right around midnight Farmer got a lemon-meringue pie out of the refrigerator, and they all had some and agreed that it was good. And then he took Ren out back, to see a rabbit hutch he'd built, and the two of them went across the grass and into a beat-up shed that was actually nice inside, with track lighting and bales of straw and a framed print of a boat in a snowstorm on the ocean.

They looked at the rabbits in their little wooden house, which was split-level with an enclosed porch. "They're American Blue Rabbits," said Farmer. "That's Rusty, and that's Dusty, and that's Caroline."

One of the rabbits shook its back, the second one hopped in a circle as if trying to follow itself, and the third went through a doorway into the house. Light shone on their smooth gray fur. The one who had gone into the house came slowly down a stairway under the house and looked at Ren and Farmer. Its eyes were black with a ring of amber.

"She loves them stairs."

"Beautiful rabbits, Farmer."

"Oh thanks. I try to keep them nice."

"You mind if I ask you something."

"Maisie told you, huh."

"Well. I wouldn't say you're hiding it."

"I was pretty down, England. Couldn't sleep or eat. It was raining every day in the spring. Christ, I couldn't even breathe right sometimes. And so much fear and bad dreams. So I went into the woods over south of the river. Bleeding into the ground sounded sort of natural, and nobody would have to clean up."

"Who found you?"

"Fish and Game."

"Do you still feel that way?"

"Well, it's better than what it was. The psych ward is not for nothing. You do learn. One woman had jumped out a window and landed on a car, and she was the kindest and most intense person you could imagine. We would meet up in the sitting room after lights out. Also, I'm on pills."

"Yeah, me too."

"I suppose we're all fucked up in our own way."

"Seems like it."

And soon they went back inside the house, where Maisie stood in the kitchen with her green slicker folded over her arm.

"Where's that thing?" she said.

"What thing?"

"That we talked about?"

Farmer went to the pantry and brought down a slate-colored handgun and gave it to Maisie, who slipped it into the pocket of her coat. He sat down in a wooden chair. He looked

tired. He took Maisie's arm and pressed it to his face.

Ren went outside then and closed the door. He wondered why he hadn't followed his instincts and stayed at the Lamplighter till closing time. He might be there right now, listening to the jukebox. He wondered if "Midnight Confessions" was still on it. The sky had cleared off and blades of grass shone chrome in the moonlight. Maybe Maisie had been standing right here when she saw Farmer and the girlfriend watching TV.

The door opened slowly, and Maisie stepped out of the house. She took the gun from her pocket, ejected the clip, ran the slide back, and looked down the chamber.

"You do that like a detective," said Ren.

"I took a course in gun safety," she said. "Learned quite a lot, actually."

THE NEXT WEEK REN got a used BMW coupe with six-speed transmission from a mechanic in Le Page. It was racing green and an awfully good car for no more than it cost. People did not want German cars in Le Page, because they were considered too complicated to fix. Ren drove it nights, past the old school and the roller rink and the river with the lanterns and silhouettes of people fishing. The Lucky 13 had gone out of business but still had the sign on the roof. Ren opened the window and downshifted through the curves above Le Page, and the town felt like his own again.

One night he picked up Maisie at her sister's house and they went to see the movie *Whale Rider,* in which a girl named Pai not only stands up to her grandfather but saves a school of whales stranded on the beach in New Zealand. Evidently the theater did not switch movies often. They sat close to the screen, Maisie on Ren's left, so she could whisper into his good ear. She smelled natural, like flowers on wood shavings, and the lights and colors on the screen played in her eyes. She cried when the girl led the whales back to the ocean, because the girl might die, and Ren took her hand and held it tight till the lights came up. □

GOOD SOLDIERS?

Women and the military in World War II

by Karen Hagemann

"WAR DRAMA STIRS UP GERMANY," read the title page of the tabloid *BILD* following the TV broadcast of the three-part series *Unsere Mütter—Unsere Väter,* in March 2013. More than seven million Germans, 20 percent of the total TV audience, watched the primetime series, on the channel ZDF. Titled in English *Generation War,* the series portrays World War II in Germany and Eastern Europe and examines the atrocities committed by the German Wehrmacht and its role in the Holocaust.

For German television viewers, the Emmy-winning series seems to have been quite stirring indeed. It questioned the myth of the unsullied Wehrmacht soldiers and demanded that viewers reflect upon their own family history. It asked who knew what, who was involved, and in which ways. In the subsequent contentious media discussion, film critics, journalists, and historians criticized many aspects of the series as not radical enough or too stereotypical. But there was one aspect that went unnoticed: the series reiterated old stereotypes about the World War II gender order.

German women in *Generation War* are presented only as caring nurses, worried soldiers' mothers, Nazi mistresses, or victims of Nazi persecution. Counter-images were a female Red Army officer and a Polish girl who joins the partisan movement. The series ignored the fact that women in the Third Reich supported World War II quite actively—and far beyond wartime nursing work—through extensive deployment in the wartime economy, where they increasingly replaced conscripted men as the conflict progressed, as well as through their integration into civil aerial-defense and the military. *Generation War* does not even hint at the fact that roughly every twentieth soldier in the Wehrmacht was a female auxiliary and that many of them served in the East.

The same blind spots exist in recent TV shows about the two World Wars produced in the former Allied countries. They show women working on the homefront, as in the BBC series *Land Girls* (2009), about the British Women's Land Army, or the Canadian series *Bomb Girls* (2012), which told the

stories of women working in a munitions factory. They also portray women as military nurses, as in the new Australian series *Anzac Girls* (2014). Movies too tend to present women primarily as suffering war victims, like in the German drama *A Woman in Berlin* (2008), or as soldiers' mothers and wives, working girls, and military nurses, like in the Canadian movie *The War Bride* (2001), the British production *Housewife, 49* (2006), and *Atonement* (2007). At best, women feature as heroines of the resistance, as in the French film *Female Agents* (2008), or as members of the intelligence corps, as in the recent British movie *The Imitation Game* (2014).

Oddly enough, most mainstream historians seem to agree with such public recollections. In the majority of monographs and textbooks on World Wars I and II published in recent years, women are rarely portrayed as active supporters of the wars, beyond their work in war industries and wartime nursing. This omission is all the more remarkable because today we can look back on nearly three decades of research on gender, the military, and war—and one of the most studied periods is the era of the two World Wars. Why did contemporaries and later generations alike find it such a challenge to recognize the increasingly active participation of women in these wars as auxiliaries and soldiers?

To answer this question, we need a comparative perspective that goes beyond "women's military history." We need a gender perspective that defines "gender" as a context-specific and relational concept and deploys it as both subject and method. Only then can we understand the importance of the military and combat for the gender order, and the influence of gender images and relations on military and war. Furthermore, we need to place the execution and experience of violence, the human "power to injure" and "vulnerability to injury," at the core of the study of war. Only with such an approach we can understand why female auxiliaries, soldiers, and partisans—despite their relatively small numbers—caused astonishingly

similar gender trouble during and after World War II, in states and regions with very divergent economic, social, and political systems.

THE ABILITY AND THE RIGHT to exercise organized armed violence have been defined as "masculine" since antiquity. Since the wars of the American and French Revolutions, the "power to injure" has been associated even more universally as "male," and the "vulnerability to injury" as "female." In the imagined gender order of nineteenth- and twentieth-century nation states, military service, and with it the male right—and, in wartime, duty—to kill on behalf of the state or another higher power, became a central marker of gender difference. Men were sent off to war as "defenders of the fatherland" to protect and preserve a "homeland" that was embodied by women. The female complement was responsibility for wartime charity and nursing. During the age of the World Wars, however, a shift occurred: combat replaced military service as the core marker.

This shift was caused by a change in warfare itself. World Wars I and II were highly industrialized "total wars," differentiated from earlier forms of war by their peculiar intensity and reach, and by the abolition of boundaries between the front and the homeland. One far-reaching consequence of this abolition was the blurring of gender lines: civilians became a major target of warfare by mass violence, and women were increasingly needed for military support.

During World War I, the first industrialized total war, the number of women mobilized as auxiliaries—or even as soldiers, as in Russia—was still small. But all other forms of female war support—volunteering in war

charities, wartime nursing, and employment in war industries—were already extensive. The scale of women's deployment during the Second World War, however, far outstripped the First in all belligerents.

In total, Nazi Germany deployed nearly 1.4 million women during World War II, with the proportion of women in the armed forces reaching about 5 percent. Some 400,000 of them were Red Cross nurses and nurses' aides, and more than 500,000 female

NAZI GERMANY DEPLOYED NEARLY 1.4 MILLION WOMEN DURING WORLD WAR II, WITH THE PROPORTION OF WOMEN IN THE ARMED FORCES REACHING ABOUT 5 PERCENT.

Wehrmacht auxiliaries served in all war theaters in the army, navy, and air force; 160,000 of the latter served in direct combat as Flak-gun auxiliaries in anti-aircraft defense units organized by the air force. In addition, the civil Aerial Defense Organization used 500,000 female aerial-defense auxiliaries. Women also voluntarily joined the institutions of Nazi persecution, such as the SS (the *Schutzstaffel,* or Protection Squadron), where some 10,000 women were active.

Since its implementation in the fall of 1939, the supervision of the Wehrmacht's women's auxiliary corps was in the hands of the NS Women's League. With the aim of strengthening the cohesion in the corps, and obliging auxiliaries to maintain "unblemished" conduct appropriate to the "reputation of German womanhood," they lived, when possible, together in communal apartments outside the barracks and wore uniforms. Half of all female Wehrmacht auxiliaries volunteered. Not before the summer of 1941, when losses increased dramatically on the Eastern Front, did conscription for the Wartime Auxiliary Service have to be introduced for young women aged 17 to 25. Auxiliaries first had to serve only for twelve months, but their service time was gradually extended. More and more women replaced male

soldiers and staff sergeants in the administration of the Wehrmacht at home and behind the lines, as well as in the aircraft, aerial defense, mechanical transport, ordnance, and telephone units. In the final year of the war, their service time was indefinite, just like that of the soldiers.

The number of women deployed by the military grew among the Allies, too. In Britain, at least 625,000 women entered military service as auxiliaries and nurses and the proportion of women in the armed forces reached a high of 9 percent. The largest organization by far was the Commonwealth-wide Auxiliary Territorial Service with 220,000 women enrolled. It was founded already in September 1938 as a revival of the Women's Army Auxiliary Corps of World War I. In addition, 180,000 women joined the Women's Royal Naval Service. Fewer women signed up for the Women's Auxiliary Air Force, which also organized female service in mixed anti-aircraft batteries, where women were actually involved in fighting. The members of the ATS, WRNS, and WAAF wore uniforms and worked in five areas: domestic, cookery, clerical, communication, and mechanical. In April 1941, all women's services were brought under the Army Act, which denied them the freedom to leave the service and allowed the employment of women in "operational areas." In December 1941, the British need for manpower became so great that unmarried women ages 20 to 30 were conscripted by the National Service Act, but they could only be used in direct operational roles when they volunteered. About 50 percent of the new female recruits chose deployment in anti-aircraft defense.

The United States deployed a total of roughly 216,000 women: 150,000 as volunteer auxiliaries, of whom 20,000 served overseas, and 66,000 volunteer nurses, who were employed in all theaters of the war. Only 1 percent of the US armed forces were women. The auxiliaries were first organized in the Women's Army Auxiliary Corps (WAAC), established in May 1942. A year later the Women's Army Corps (WAC) was founded. It integrated women into the regular army, but in distinct women's units. Different than the British, the American government decided not to deploy women in mixed anti-aircraft defense units despite very good test results by the army, which were not published until 1968. The political leadership feared fierce public opposition.

World War II female auxiliaries performed the same kind of jobs in the German, British, and American armies as they did during World War I, but in addition were granted access to several new positions in communication and anti-aircraft defense of an increasingly technical nature. Women replaced men even as engineers and pilots. In Britain and the United States, auxiliaries became part of army

IN THE RHETORIC OF THE THIRD REICH, ARMED COMBAT WAS THE VERY CORE OF MILITARY MASCULINITY.

personnel and were placed under military law and discipline. In Nazi Germany, they kept the status of civil employees without military status, despite doing de facto military jobs. In legal terms, Wehrmacht auxiliaries were considered part of the "army entourage." With this categorization, the Nazis tried to avoid the impression that they used women as soldiers. In the rhetoric of the Third Reich, armed combat was the very core of military masculinity. Accordingly, a secret communiqué from the Supreme Command of the Wehrmacht instructed the officer corps in September 1944: "The dominant principle of any deployment of women . . . must be that 'the female soldier' is incompatible with our National Socialist view of womanhood. As a matter of principle, women do not participate in armed combat, even when threatened with being taken prisoner."

Army leadership in all World War II countries accepted women in the military only because of dramatic losses of male personnel. This was also the case in the Soviet Union, where manpower problems were most pronounced. In total, about 2.1 million Russian women were deployed for military purposes during World War II: 520,000 served in the Red Army's regular troops, with at least 120,000 of them fighting on the front lines; 200,000 served as combat medics; and 80,000 served as doctors in the mobile front-line hospitals. Another 300,000 women were enlisted in combat and homefront anti-aircraft formations. In addition, the Russian Red Cross trained 300,000 women as nurses and 500,000 as paramedics, who served in all regions of the Soviet Union. Many of the mostly young and single female soldiers volunteered and insisted on fighting on the frontlines. They used the ideology of "women's equality," which they had grown up with in the *Komsomol*, the communist youth organization, and pointed to their paramilitary and shooting training as further legitimation of their demands. But the recruitment of female volunteers was soon not enough. With the dramatic losses in 1942–43, the Soviet regime had to start conscripting women for the army. Roughly 3 percent of Russian army personnel were women, who mainly served in mixed units. The Stalinist state hushed up the extent of female military mobilization in public, despite its political rhetoric of "women's emancipation." It anticipated disapproval, if not outright resistance, in society.

Extreme manpower needs also drove female inclusion in combat positions in the partisan units fighting against Nazi occupation in Eastern, Southern, and Western Europe, where an average 10 to 15 percent of the combatants were women. Communication and intelligence services became other important female tasks, since women could move more freely in occupied territories under the guise of doing errands. Predominantly, however, women in the partisan units were used for similar assignments as in the regular armies.

Recruitment Poster for the US Women's Army Corps (WAC), 1941–1945. US National Archives and Records Administration.

A COMPARISON OF FEMALE MILITARY service in the various wartime powers reveals expected differences, but also astonishing similarities. The differences are primarily in the war aims and the political ideology used to legitimate them. The Third Reich mobilized German women for a war of conquest and annihilation. Its conduct of war was characterized by a murderous will for destruction and cannot be separated from the Holocaust. Many of the young female volunteers for auxiliary service and nursing supported the political agenda of the Nazis. They were socialized by the NS youth organization *Bund Deutscher Mädel* (League of German Girls), believed in the "superiority of the Aryan race," and wanted to participate in the "German expansion." With defeat and retreat it became more difficult to mobilize women. In an "Order on the Implementation of Total War" of November 1944, the NS state declared the "final battle." It asked that "German women and girls do everything" in their "power to allow the soldiers . . . to devote themselves completely to service at the front."

For the Western Allies, by contrast, World War II was a "war of defense." They mobilized women in a struggle for liberation and liberty and used the rhetoric of patriotism. In a situation of "national emergency" women had to "serve the fatherland," too—by freeing men in all possible ways for the frontlines and by supporting them in their struggle. The Soviet Union also used patriotic rhetoric to mobilize for the country's defense and liberation. But here the situation was more dire because of the occupation of large parts of the country. Furthermore, the communist ideology added a specific dimension: the young generation's vision of the "New Soviet Women" included fighting in the event of a war of defense.

In addition, the legal status and organization of women's service for and in the military was different. Both depended mainly on the general organization of the military, but also on the extent of manpower needs. Predominant ideas about the gender order were an influential factor too,

as the example of the Soviet Union demonstrates. Its official ideology of "women's equality" allowed not only for the integration of women into combat in mixed units, but also for the acceptance of women in command functions. In the Red Army, female soldiers could be in charge of male soldiers. This was impossible in the armies of its allies and enemies.

The similarities can be seen mainly in the public discourse, especially in the cultural strategies deployed for women's mobilization and for the retention of the gender order, as well as in the social perception. One major parallel between Germany, Britain, and the United States was the political and public rejection of female participation in combat. Laws and regulations reserved the duty and right to kill for men, and political rhetoric connected it to male citizenship rights, privilege, and power. Both the Nazis and their Western adversaries alike strongly rejected "female soldiers," who symbolized for them the collapse of the gender order and, with it, the social order. They did everything to classify and present female service to the public as "noncombatant," but the needs of war resulted in less rigid practices. This was especially so in Britain and Germany, where women were used in mixed anti-aircraft formations—including in Flak batteries, which politicians and the military sought to conceal in war propaganda.

An exception was the Soviet Union, which officially integrated women as female soldiers, but kept the real extent of their combatant service hidden from the public. Four main factors seem to have led to this ambivalent practice: first, the context of a dramatic military crisis, the occupation of large parts of the country, and the danger of a devastating defeat; second, a tradition of female military units in World War I; third, an official political ideology of "women's equality"; and fourth, a population that was largely conservative and more traditional about gender roles.

Related to the different attempts to prohibit, control, or hide female participation in combat was a second

important similarity: the cultural strategies that especially the American, British, and German armies deployed to maintain clear gender boundaries. Women were only mobilized as "helpers" of men. The recruitment posters demanded that they "free men" for the army, support them in their struggle, and become "good soldiers." In their illustrations, the posters emphasized the femininity of uniformed female auxiliaries while attempting to tame their sex appeal to reassure parents and fiancés. Army regulations tightly controlled the public appearance of auxiliaries in the American and British armies. In the Wehrmacht, the "Official Regulations for Female Signal Auxiliaries in the Armed Forces," published in April 1942, went so far as to demand that a "German woman must not smoke or drink or wear make-up or jewelry." Furthermore, the army leadership of all war powers attempted to control the independence of the auxiliaries by regulating their housing, their leisure time, and their relationships. With such measures, they hoped to counter public suspicion that female auxiliaries had joined the ranks mainly for adventurous and immoral motives—a suspicion that at the same time helped to "restrain" them.

A third similarity involves the attempts of the Western war powers and Germany to reinforce, through propaganda and popular culture—especially war movies, like the German movie *Wunschkonzert* (1940), the British film *In Which We Serve* (1942), or the American *Mrs. Miniver* (1942)—the traditional gender order of national wars. One main function of these attempts was to give ordinary soldiers a cause worth fighting for, despite—or better perhaps, because—of the opposite reality: in "total warfare" they were no longer able to protect the civilians of the "homeland." Another important function was to uphold hearts and minds, distract from the realities of war, and prepare society for a return to the "normality" of postwar gender relations.

THERE IS MUCH EVIDENCE THAT, in most societies, the postwar era was a period of intense "re-gendering" of the social order. Governments sought to counteract the expansion of women's scope of action during World War II through quick demobilization in industries and the military. Veterans needed to be reintegrated into society by returning to their old jobs and become employed "breadwinners" again. In the West, this demobilization policy was accompanied by a cultural promotion of the "breadwinner-housewife family" and a politics that aimed to stabilize this model through civil law, and labor and family policy. In the context of the "economic miracle," the 1950s became

ONE FORGOTTEN GROUP IN POSTWAR COMMEMORATION ARE WOMEN IN MILITARY UNIFORM, PARTICULARLY THOSE IN COMBAT POSITIONS.

the golden age of the "breadwinner-housewife family" in Western Europe and the United States.

Despite the socialist rhetoric of "women's equality," the trend in the Soviet Union and the new communist states of Eastern Europe was similar in the first postwar years. The Red Army reverted quickly to an all-male institution after 1945. To be able to integrate returning soldiers into the economy, women had to vacate their jobs in the war industries of the East as well. After 1944–45, the image of women as family-bound housewives and mothers came to dominate Soviet propaganda and, due to vast losses in the population, the regime now emphasized women's reproductive role. But this policy started to change soon, because the recovering communist economies needed more and more women in the workforce. The East propagated the model of the "double-earner family," in stark contrast to the West. As a result, by 1950 the average percentage of women in the economically active population was already much higher in the East: in East Germany it was 40 percent and in the Soviet Union 38 percent, but in Britain only 31 percent and in West Germany 30 percent.

A central part of the cultural demobilization in both the West and the East was the lasting concealment of women's military deployment, which had posed the ultimate challenge to the gender order. Memory construction was thus of crucial importance for the re-ordering of the postwar gender regime. One especially fascinating example is the Soviet Union. Even before the war was over, Soviet propaganda reduced women's war participation mainly to the role of medics, supposedly working far from the combat zone. Military leaders officially advised female veterans to remain silent about their war experiences and the Soviet Union did not commemorate the large number of female soldiers for several decades. Auxiliaries also found no place in the collective memory of the Western Allies and in the two postwar Germanies.

At the center of the national war memories of all Allied countries remains the fallen soldier—imagined to have lost his life in combat. Examples are, in Britain, the Cenotaph at Whitehall in the center of London, the monarchy's primary war memorial since 1921; in the United States, the Arlington Memorial Amphitheater, dedicated in 1920, and the national World War II Memorial in Washington, DC, opened in 2004; and in Germany, the vast Soviet War Memorial in Berlin's Treptower Park, commemorating the Russian soldiers who fell in the Battle of Berlin in April and May, 1945. It opened in 1949 and served as the central war memorial of former East Germany.

The sacrifice of war widows, especially mothers, and the selfless work of nurses are recalled as the female counterpart to male heroism. Civilians too were commemorated as victims of air raids and war atrocities. One example is the New Guardhouse in the old city-center of Berlin with an enlarged

version of the Käthe Kollwitz sculpture *Mother with Her Dead Son* at its center. Since 1993, it has been the "Central Memorial of the Federal Republic of Germany for the Victims of War and Dictatorship." By virtue of this dedication, it includes *all* victims of war. The fallen soldiers are remembered here without any heroization.

One forgotten group in postwar commemoration are women in military uniform, particularly those in combat positions. The fact that they had been needed, did their duty, and mostly did it well, has been curiously absent from collective memory, though remedied in part in 1997 with the US government's Women in Military Service for America Memorial at the Arlington National Cemetery, and, in 2005, with the British Monument to the Women of World War II, situated close to the Cenotaph in London's center, remembering the war service of *all* British women. To this day, no monument is dedicated to female Soviet veterans.

The odd paradox is that the more women had been necessary in war, especially in combat roles, the less their service could be remembered after 1945. These memories, it seems, threatened to jeopardize social stability restored by the return to the prewar gender order. This is why collectively remembering female military service was far easier for the United States than for Britain, and certainly more than for the Soviet Union and defeated Germany. Here, the grueling past was countered in the East with the myth of the heroic anti-fascist resistance, and in the West with a victimization narrative focused on the aerial bombing of German cities, postwar displacement, and mass rape by the Soviets. In this narrative, women and children became the incarnation of innocent victims of war. As *Generation War* demonstrates, even today it is challenging to the German memory of World War II and the Holocaust to recall the extensive and very active war support of German women. Such recollections make it far more difficult to portray Germans as victims of World War II. □

BEING GERMAN, BECOMING MUSLIM

An anthropologist's account of religious conversion at the heart of Europe

by Esra Özyürek

Today it is estimated that there are 100,000 German converts to Islam. It is not possible to know the exact number, but that total is comparable the number of converts in the United Kingdom and France. Even though there are so many converts to Islam, and even though Europeans have been converting to Islam for hundreds of years, today's converts generate deep astonishment and suspicion.

I spent three and a half years with German converts to Islam in Berlin and talked to close to a hundred of them—male and female, from all ages and income groups, from a variety of prior religious affiliations, and with both East and West German backgrounds. I spent countless hours in German-speaking mosques, taking part in regular study, praying, or family fun events. I hung out at halal restaurants, frequented Islamic clothing stores, and visited German-speaking Muslims in their homes. I met a few people only once, many others regularly at mosque events. Some of them became close friends; many made my life richer.

The leading question of my research, published in book form by Princeton University Press in November 2014, was the complex relationship between race, religion, and belonging in Europe. Despite a centuries-long presence on the Continent, Islam is increasingly seen as external to Europe. It is judged as a distinct set of values that belongs to newcomers who cannot integrate. I wanted to know what the experiences of indigenous Europeans who embraced Islam would add to the discussions of Islamophobia, anti-Muslim racism, and the "externalization" of Islam taking place in Europe now. I wanted to understand what choosing Islam entailed in a country where more than 50 percent believe there are "too many Muslims" in their country. And what the consequences would be of individual conversions for German society, Muslim communities, and their relationships to each other.

WHEN THEY ASK about my research, most people want to know why Germans convert to Islam. My answer to that is that it is not possible to know why

Omar Mosque in Berlin-Kreuzberg. Photo by Sean Gallup/Getty Images, 2010.

they, or anyone, would convert, just as it is not possible for most of us to know why exactly we choose our partners. Even when we feel like we know why, the reasons we attribute will change throughout the decades. This is the same with the converts.

What we can know, however, is how converts came in contact with Islam, a necessary but not sufficient condition for conversion. And in this case, Germans—and other Europeans for that matter—almost always convert following meaningful contact with Muslims. It is important to note that, most of the time, the Muslim they met is not a practicing Muslim. Relationships are established during holidays, at work, at school, and many times at night clubs. In the most typical account, a non-Muslim man or woman meets a Muslim man and is impressed by some personal quality. The most typically reported characteristics are commitment to friendship, generosity, family ties, and, sometimes, a sure stance toward the existence of God and his message.

The overwhelming majority of converts I met reported that they developed a desire to learn more about Islam following such an encounter, regardless of whether the "Muslim" they met was religious or not, or whether they had a conversation about religion. Having an intimate or a meaningful encounter with a Muslim, many times a mere nominal one, was what opened these people's hearts to Islam and encouraged them to begin learning more about Islam, a religion they all told me that they had heard of but knew little about. This research sometimes began by asking the new Muslim friend about their religious beliefs but was most often done alone, on the Internet. Interestingly, unless the original Muslim contact also devoted himself to Islam, the relationship between the new Muslim convert and the original Muslim contact came to an end; most often the convert continued along his or her spiritual path alone.

The history of conversion to Islam is also the history of Muslim integration in Germany. For more than a

century, German men and women, young and old, rich and poor, gay and straight, religious and atheist, Christian and Jewish, Protestant and Catholic, indigenous and immigrant, have been embracing orthodox and Sufi, Shia, and Sunni interpretations of Islam. Different kinds of Germans have encountered different kinds of Muslims at different historical moments. People involved in Muslim and German encounters at any particular time have largely shaped the vision of Islam that German converts embraced. In the 1920s, because Muslims of Berlin were primarily students, and the Ahmadiyya Society, which dominated the Muslim scene, was organizing literary meetings for open-minded intellectuals and literary types, converts came from a well-educated elite—including Orientalist scholars, aristocrats, and professionals. German-speaking converts to Islam also included Jews who had come into contact with Islam during their travels to Palestine, and sometimes through their contact with Muslims in Germany.

Guest workers who arrived in the 1960s to build up the German economy changed the scene of Islam and converts. These workers were overwhelmingly single men. Despite their isolation in factories and worker dormitories, and their lack of access to the German language, they developed romantic relationships with German women. During this period, more women than men converted to Islam.

In the 2000s, the dynamic changed again. Even though older trends of conversion continue, today there is a new cohort of converts who are young, male, lower class, and often Germans of color. These young men—and also women—convert to Islam through contact with native-born Muslim friends, with whom they drink alcohol, smoke marijuana, paint graffiti, and listen to hip-hop music. As Islam in German society becomes further marginalized and criminalized, it becomes more attractive for marginalized non-Muslims. German youths with diverse backgrounds who live in the affordable peripheries of big cities, like the Berlin districts of Neukölln and Wedding, where I did most of my research, are wont to convert to Islam.

These neighborhoods are home to large Turkish and Arab populations, alongside poor, white native-Germans and non-Muslim immigrants from Russia, Eastern Europe, Africa, Asia, and Latin America. I found that Islam is increasingly an integral part of a new and ethnically mixed youth culture in Germany and throughout Europe. Moreover, the significant increase in the number of converts during the 2000s was conjoined with the global rise of Salafism, the school of Sunni Islam that condemns theological innovation and advocates strict adherence to shari'a law. Unlike other ethnically based mosques in Germany, Salafi ones are eager to attract and accommodate new Muslims and teach their interpretation of Islam in the German language.

The historicization of Islam in Germany also demonstrates the religion's democratization. One way of reading this history is as an index of Islam's declining value. As the perceived value of Islam decreased in Germany over time, so did the socio-economic background of its converts. In other words, the more marginalized Islam became, the more people from marginal segments of German society found it attractive. But a closer look at German conversion trends leads to another, more positive interpretation. Whereas in the early twentieth century there were only a handful of converts, today the number is estimated to be close to 100,000. Conversion affects the lived experience of both native Germans and migrant Muslims, as well as the definitions of these terms. The dramatic increase in conversion over the past several decades shows how much a part of German society Muslims have become. As Muslims have been transformed through their migration to Germany, they have also transformed German society in fundamental ways. In the process, Islam has become one of Germany's major religions.

I conducted fieldwork between 2006 and 2014. During this period, Muslims became a larger part German society, which also became increasingly Islamophobic, as witnessed in the recent PEGIDA movement. German converts to Islam thus faced the double challenge of accommodating Islam to German identity and carving out legitimate space for Germans in the Ummah, the global community of Muslims. As Muslims were increasingly racialized and marginalized, both of these proved to be difficult tasks.

Mainstream German society marginalizes German converts to Islam and questions both their German-ness and European-ness, based on the belief that one cannot be a German or a European and a Muslim at the same time. Converts to Islam are accused of being traitors to European culture, internal enemies that need to be watched, and potential terrorists. Having become new Muslims in a context where Islam is seen as everything that is not European, ethnic German converts disassociate themselves from Muslim migrants and promote a supposedly denationalized and de-traditionalized Islam that is not tainted by migrant Muslims and their national traditions—but instead somehow goes beyond them. Some German Muslims, along with some other European-born ethnic Muslims, promote the idea that once cleansed of these oppressive accretions, the pure Islam that is revealed fits perfectly well with German values and lifestyles. Some even argue that practicing Islam in Germany builds on the older, but now-lost, values of the German Enlightenment (*Aufklärung*), including curiosity and tolerance. For East Germans who converted after the fall of the Berlin Wall, becoming Muslim can be a way of escaping their East German identity.

Born Muslims who grew up in Germany increasingly adopt these discourses and promote de-culturalization of Islam as a way for Muslims to integrate into German society without giving up their religious beliefs. At the same time, a newer and more popular trend of Islamic conversion, namely Salafism, bypasses the questions of national tradition and identity altogether by ostensibly going back to the earliest roots of Islam, with converts isolating themselves not only from non-Muslim society but also from other Muslims.

One of my main arguments is that the call of many German and European-born converts for a purified Islam (and the attractiveness of Salafism) can be best understood in the context of increasing xenophobia and Islamophobia, where being Muslim is defined as antithetical to being German and European. When confronted with unexpected hostility from mainstream society, converts to Islam take an active role in defending the place of Islam in Germany by disassociating it from the stigmatized traditions of immigrant Muslims. The German Muslim interpretation of a "purified Islam" is inspired by Islamic revivalism worldwide, but also by the Enlightenment ideals of rational individualism and natural religion. While this call for a culture-free, tradition-free Islam that speaks directly to the rational individual

seems universalistic, in the contemporary German context it ends up being strictly particularistic or, more precisely, Eurocentric. It assumes that the "European" or "German" mind is truly rational—and that the "Oriental" mind is not. Free of the burden of its cultural past, the real message of Islam appears in its essential form.

This is one of the reasons why the Salafi interpretation of Islam is increasingly popular among new Muslims in Germany. This puritan interpretation of Islam—conversionist, literalist, anticulturalist, antihistorical—is attractive to both converts and born-again Muslims, since it places them on equal-footing with—or even better, makes them feel superior to—all other Muslims. This is especially powerful in a context where immigrant Muslims are routinely accused of being misogynistic, violent, and uneducated. Salafism allows new converts to fully embrace their religion without having to deal with cultural traditions and ethnic groupings. It even permits them to feel superior to Muslims with immigrant backgrounds and invites them to a "true Islam," which is not Turkish, Arab, or Pakistani. Salafi mosques are the only Muslim spaces in Germany where piety matters more than ethnic or national background.

As Islam and Muslims become increasingly integrated into German society, popular and state angst about this ostensibly non-European but well-established element is directed at the small number of ethnic Germans who have embraced Islam. Converts provoke so much anxiety not because they may turn Germany into a Muslim-majority country or terrorize the entire nation, but instead because simply through their (most often entirely politically unmotivated) personal choice of religion, they defy the newly established boundaries between political alliances, cultures, and civilizations. In this way, converts to Islam break ground for genuinely new ways of being and becoming Muslim, German, German-Muslim, and Muslim-German. At the same time, they provoke new anxieties about the changing realities of being European. ☐

Sanford Biggers

What does a tree symbolize? Does it represent growth and groundedness, or is it more evocative of the gallows used to lynch runaway slaves? Perhaps it represents myths from Christianity or Greek mythology? For artist Sanford Biggers, it can represent all of the above —and his approach to communicating that complexity can be seen in his 2007 sculpture *Blossom*, which depicts a tree growing up through the middle of a grand piano. Biggers draws on inspiration as varied as Buddhism and Dadaism, as diverse as Beethoven and John Cage, and he has established himself as an acclaimed interdisciplinary artist whose sculpture, installations, and even music—performed with his group Moon Medicin—are in increasingly high demand. "Once you put yourself into a category," he has said, "it's immediately a limitation, and it can truncate what you're trying to say." Still, there are a number of themes that are frequently revisited in Biggers' artwork, perhaps the most important of which is his ongoing effort to move as fluidly through the mediums of painting, sculpture, performance, and video as he does through the disparate themes of history, politics, high versus low culture, and humor. His work has appeared in the Museum of Modern Art, Tate Britain and Tate Modern in London, and the Brooklyn Museum in addition to many others both in the United States and abroad.

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PREVIOUS PAGE: *Cheshire*, 2008; Aluminum, Plexiglas, LEDs, timer; 67 × 33 × 10 in.; courtesy of the artist and David Castillo Gallery, Miami

[1] *Prayer Rug*, 2005; Colored sand poured unfixed directly on floor; 40 × 20 ft.; courtesy of Triple Candie, New York; photograph courtesy of Tom Powell [2] *Tamboline*, 2013; Steel, tatami mat; 32 × 32 × 10 in. [3] *Blossom*, 2007; Silk steel, wood, MIDI player piano system, Zoopoxy; 12 × 18 × 15 ft.; courtesy of the artist and Grand Arts, Kansas City

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TRAIN TO PEREDELKINO

Remembering the
Doctor Zhivago affair

Tomas Venclova, a poet, essayist, translator, and the spring 2015 Axel Springer Fellow at the Academy, was part of the Lithuanian and Soviet literary and dissident movements of the 1960s and 1970s. In 1977, he became a founding member of the Lithuanian Helsinki Group and was subsequently stripped of his Soviet citizenship. Forced to emigrate, Venclova began teaching Polish and Russian literature at Yale University in 1980. This interview is excerpted from the forthcoming book *Magnetic North*, Venclova's conversations with **Ellen Hinsey**, a spring 2001 American Academy alumna.

Ellen Hinsey: In 1958, *Doctor Zhivago* was published in Italy without Soviet approval. How did it come to pass that you and a few fellow students wrote Boris Pasternak a letter of congratulations regarding his nomination for the Nobel Prize?

Tomas Venclova: Everyone in our small student group in Vilnius loved Pasternak's poetry. His nomination for the prize was a joyous occasion (I believe we learned about it on the radio, which, in 1958, was less jammed than before). During one of our meetings, quite spontaneously, we composed a short letter. In it, we expressed our faith that Pasternak would receive the well-deserved prize, and wished him good health and productive work.

Hinsey: How was this letter of congratulations transmitted to Pasternak?

Venclova: While attending Moscow University, my friend Pranas Morkus had established contact with some people close to Pasternak. As far as I know, the letter was transmitted via Irina Emelyanova, the daughter of Pasternak's last love, Olga Ivinskaya, who was the prototype for Lara. (After the poet's death, Irina and her mother spent time in prison camps. I became acquainted with Irina after she was released.)

Hinsey: On October 23, 1958, the Nobel Committee awarded Pasternak the Nobel Prize. After first accepting the award, he came under intense

pressure from the Soviet leadership and was forced to renounce it. How did you learn about these events?

Venclova: Again, by Western radio. Then, the Soviet media informed us of "the reactionary uproar raised in the imperialist press" because of the prize. In my diary, I noted that I had eagerly joined the reactionary uproar. As it turned out, it was the Soviet response that soon developed into a sort of pandemonium. Several years earlier, Pasternak had attempted to publish the novel in the USSR. A group of highly placed writers addressed him a letter explaining that the novel was unfit for print because of its counter-revolutionary tendencies. Now the letter was made public. The phrase "an apology for treason" was among its milder invectives. Dozens of letters soon appeared in the press, condemning Pasternak in the harshest imaginable terms. This "voice of the people" was characterized by the repeated expression, "I haven't read the novel and have no intention of reading anything so abominable, but…" The phrase "I haven't read the novel, but" soon became an ironic catchphrase. My father, who was visiting Moscow at the time, recounted the reaction of some of the Russian writers he knew—for example, Kornei Chukovsky, who supported Pasternak, and Konstantin Fedin, who denounced the writer's actions. General meetings of writers were assembled everywhere with the express goal of condemning Pasternak. This happened in Lithuania as well.

Hinsey: Your father was among those who condemned Pasternak—

Venclova: Yes. Perhaps he actually considered Pasternak's stance to be harmful. In any case, that was definitely a black mark on my father's biography. In his defense, I remember an incident from 1965. Father was telephoned by a correspondent from the Moscow newspaper *Izvestiya* and was asked to express his disapproval of Andrei Sinyavsky and Yuli Daniel, two writers who had published their work abroad under pseudonyms and were put on

trial. He politely refused, saying, "I condemned Pasternak, and I regret it."

Hinsey: The storm around Pasternak did not abate and the writer was forced to make a public statement refusing the Nobel, which was published in *Pravda* on November 6, 1958.

Venclova: I understood that the pressure on Pasternak was unbearable, and that he felt responsible not only for himself, but for the people around him. More than one person, including Pasternak himself, believed that he could be executed or at least imprisoned for a considerable term—not long before, that had been Babel and Mandelstam's fates, whose "crimes" were less serious than Pasternak's. Still, I was unhappy that the great poet had been forced to his knees. Actually, there were two public statements by Pasternak, only the first of which struck me as dignified.

Hinsey: In January 1959, an event was organized between two poets—yourself and Vladas Šimkus—at the Writers' Union in Vilnius. You were 22 years old. The premise of the evening was to set two young poets against each other, and to expose the decadent nature of your work. You had previously publicly said that Pasternak was your favorite writer.

Venclova: This was a typical Soviet affair: the work of budding poets was frequently discussed and evaluated by the Writers' Union functionaries. It was usually a prelude to their admission to the Writers' Union. Membership brought with it some privileges, the main one being the possibility of earning one's living without official employment, by royalties only. Brodsky was arrested as a "social parasite," because he was unemployed and not a member of the Writers' Union. People were sometimes allowed to make their living as translators, but then they had to belong to the Writers' Union's parallel bodies: all of this was mind-boggling bureaucratic stuff that aggravated my life, and the lives of many others, for years.

Hinsey: Would you describe the scene at the Writers' Union?

Venclova: The hall of the Writers' Union was full (incidentally, the Union was located in one of the most aristocratic buildings in Vilnius, a veritable palace). Not only were established writers in attendance, but lots of young people, including my friends Judita Vaičiūnaitė and Romas Katilius. (Father, perhaps understandably, thought it inappropriate to be present). Šimkus and I read samples of our work aloud: I remember that I envied his technical deftness. Several rather bland speeches followed. Then, a budding critic said that my verses were perhaps talented, but individualist and therefore hostile to the spirit of Soviet society. "Such poetry could have been written by Doctor Zhivago," he concluded. After that, several older writers attacked me in less ambiguous terms. "The emperor has no clothes" was one of the milder phrases. To tell the truth, it was only then that I fully understood that I was popular among young people, and that the authorities were determined to undermine that popularity.

When I was given the floor to reply, I started by quoting a humorous Lithuanian proverb: "We are all naked under our shirts." After that, I said that no one present in the hall, including myself, had actually read *Zhivago* and therefore was in a position to discuss it. (It was an obvious truth but a blasphemy at the same time, since it went against the Soviet custom of slandering books one was strictly forbidden to read). I continued: "So now let's forget about Pasternak's fiction. As for his poetry, I cannot deny that I love it and have learned much from it, as well as from Mandelstam and Akhmatova." That created total consternation, and the meeting was immediately cut short.

Hinsey: Were you at all concerned about the implications of such an act?

Venclova: Not immediately. I simply felt that it had to be said, otherwise I would have been ashamed for the rest of my life. After the crowd dispersed,

my friend Romas and I headed toward his house, discussing the event. I told him: "Well, it has something to do with the meaning of life." Of course I understood that I had jeopardized my admission to the Writers' Union at the very least, and was probably now blacklisted for many jobs, but somehow that did not worry me.

Hinsey: You have said that the event at the Writer's Union was the beginning of your "private war" with the system.

Venclova: Yes, it was. I believe it was on that day that the authorities understood that they were unlikely to find *modus vivendi* with me.

Hinsey: Despite the events that had unfolded in connection with the Nobel Prize, on December 14, 1959, you decided to travel to Peredelkino to visit Pasternak with Natasha Trauberg.

Venclova: Peredelkino is a village ten or fifteen miles west of Moscow, with a small Orthodox church, next to which Pasternak was buried, in 1960. It consists mainly of writers' houses, so-called *dachas*, usually wooden and sometimes quite spacious. Pasternak was assigned his dacha in the 1930s, when he was still hailed as one of the "leading Soviet poets," and it was there that he spent the last decades of his life.

To get to Peredelkino one takes a suburban train. The day of our visit was clear, the landscape reminded me of provincial Russia (it was difficult to imagine that the capital was so close by), and there was snow on the ground. Pasternak's two-story dacha, with a glassed-in porch, was surrounded by a rather large courtyard. The walkway had been cleared of snow by the poet himself (he liked to perform domestic chores and, as far as I know, did not employ any help). There was a sign on the gate: "Beware of the Dog." Such signs were commonplace in Russia and generally meant "Do not disturb," but here it had an ambiguous ring, given the epithets with which Pasternak had been tarred in the official press.

I believe we rang the bell, and a slender, youthful-looking man came to the door and motioned for us to enter. He greeted Natasha cordially. We sat together in the spacious vestibule, where one or two paintings by Pasternak's father, Leonid, hung. Leonid was a famous painter in his time, a friend of Leo Tolstoy, and Pasternak insisted that he was a much better artist than himself. The poet apologized, saying that he had to go to Moscow in an hour or so to attend a theater performance. I think it was *Faust*, to which he had been invited by a troupe of East German actors. "What do you think—will I be executed afterwards or not?" he asked half-jokingly. "We don't think so," we answered.

Hinsey: If I remember correctly, one of the points you had wanted to bring up with Pasternak was your admiration for his early poetry, which he had renounced. What was the substance of your exchange?

Venclova: Natasha introduced me as a young poet who was attempting to translate Pasternak's verses into Lithuanian. "Don't do it," he said. "It's not worth it. My early verses are rubbish—mannered, pretentious, and incomprehensible. If I have written anything sensible in my life, it is my novel. Now I'm working on a play. I hope it will be something that really makes sense—of course, only if I try with all my might."

I did not agree with his judgment, above all because I was not a fan of *Doctor Zhivago*. Yet I was too shy to argue and just mumbled something registering my objection. (As for the play, *The Blind Beauty*, it remained unfinished. The first half of it, printed after Pasternak's death, proves beyond any doubt that it was destined to be a failure.)

Hinsey: What were your other impressions of Pasternak during that visit?

Venclova: We talked for perhaps forty minutes: that is, he talked animatedly and incessantly, and we

listened, interrupting him from time to time. I remember his words: "There are two kinds of literature. Take, for instance, Thomas Mann: very wise, learned, witty, even profound, but it remains what it is—just literature. Now take Dostoyevsky or Hemingway. They manage to create a universe that works according to its own rules. And this is the point. My early poetry belongs to the first domain; hopefully, my novel (he never said "*Zhivago*") belongs to the second." His high opinion of Hemingway probably had something to do with the fact that *The Old Man and the Sea* had just been translated into Russian, and was immensely popular among intellectuals.

There was also some discussion regarding Pasternak's situation vis-à-vis the authorities. "You know," he said, "it doesn't matter to me that some people denounced me and others refrained. No hard feelings, in any case. Everything that has happened has brought me to a place where such matters seem totally insignificant." When we left Pasternak's house, I told Natasha: "He is so young and energetic —he'll live at least another twenty years." I was wrong. He already had terminal cancer, although no one, including Pasternak himself, was yet aware of it.

Hinsey: Pasternak died on May 30, 1960. You were present at his funeral. Did you come to Peredelkino from Vilnius?

Venclova: No. During that period I visited Moscow frequently, and I was at Natasha Trauberg's flat when, as far as I can remember, someone telephoned and told us about the poet's death. For me, it was a veritable shock. There was a strange coincidence, however, the full meaning of which only became clear much later. On May 30, unaware of the poet's death, my friend Volodya Muravyov and I visited the underground painter Oskar Rabin, who lived in a distant Moscow suburb. We looked at Rabin's work, which was more or less Expressionist, and was critical of Soviet life, to put it mildly. We then drank some vodka, and Volodya read aloud several verses

From Boris Pasternak's House in Peredelkino. Photo © Igor Palmin, 1983.

by a young Leningrad poet named Joseph Brodsky, including his famous poem "Pilgrims." I considered them to be rather weak and melodramatic, but felt that Brodsky—previously unknown to me—possessed a sort of poetic charisma. Thus, on the very day of Pasternak's death, I was introduced to a different great Russian poet and future Nobel Prize winner. The next morning, I visited Natasha and got the sad news. I went to the post office and sent a telegram to our Vilnius circle of friends about the event. In the telegram, I used only the poet's first name and patronymic, Boris Leonidovich, to avoid any hitches in sending it.

Hinsey: Information about Pasternak's death was largely suppressed, but thousands of people came to Peredelkino to pay their last respects.

Venclova: For the authorities, Pasternak's death created a sort of predicament. Obituaries of Writers' Union members normally appeared in the press, yet Pasternak had been expelled from the Union, and his name was virtually unmentionable. On the other hand, passing over the event in silence was also inappropriate: it would have been natural under Stalin, but Khrushchev insisted on a modicum of "liberalism," however hypocritical that might be in reality. Therefore, a small notice was printed on the last page of a literary periodical about "the demise of B. L. Pasternak, a member of the Litfond (Literary Fund)." The Litfond was a survivor from the Tsarist period—a self-supporting charity organization. It used a percentage of its members' royalties to help impoverished colleagues and their families (also incurable drinkers, as was stated

in the original charter). Incidentally, all the dachas in Peredelkino technically belonged to the Litfond. Pasternak was never expelled from it; the Litfond was the only Soviet collective body that sheltered him from becoming an "unperson," to employ Orwell's term.

This unconventional obituary was just a formality, since the news spread instantly by word-of-mouth. Someone put a handwritten note about the upcoming funeral in the hall of the Kiyevsky railway station, from which suburban trains ran to Peredelkino. As far as I remember, the police did not remove it. Natasha's husband Virgilijus Čepaitis and I went to the station and boarded the train (Natasha was too upset to go). All the carriages were full, and we ran into more than one of our Moscow friends.

Hinsey: Could you describe the scene in Peredelkino?

Venclova: The crowd was immense. It assembled spontaneously and was made up of people from every walk of life. Many writers attended, even if literary functionaries (many of them with dachas next to Pasternak's) were conspicuous by their absence. Incidentally, Voznesensky, a young poet considered to be Pasternak's protégé, also did not appear. The event was a sort of litmus test. Without any prearranged plan, it developed into a dissident demonstration, the first in many, many years. There had been nothing like it in Russia since Leo Tolstoy's funeral, in 1910. The comparison came naturally to mind, since Tolstoy was also a dissident in his time, and attending his funeral was considered a sign of defiance. Pasternak himself, twenty years old at the time, was present at Tolstoy's coffin. The throng that filled the large field between Pasternak's house and the cemetery was exceptionally dignified and silent.

Hinsey: Apparently the funeral procession did not make use of an official car that had been made available for the occasion. Instead, there were pallbearers?

Venclova: Neither I, nor, I think, anybody else in the crowd, had heard about an official car. At one moment, the coffin was simply brought out of the house and slowly carried in the direction of the church. It was probably a mile (a kilometer and a half) between the dacha and the uphill cemetery; therefore the procession lasted a long time. I was rather far from the coffin's path and did not see the people who were carrying it. There were, I think, a dozen or two pallbearers, mainly the poet's close friends, taking turns in their duty.

Hinsey: After Pasternak's coffin was lowered, the crowd refused to leave. What was the mood at this point?

Venclova: I remember a dignified if bland speech at the graveside by one of the poet's friends, the elderly philosopher Valentin Asmus. Perhaps two or three other short speeches followed, but I have no memory of these. Then, somebody shouted: "Glory to the deceased! He was the most honest person in Russia!" A commotion followed: the self-proclaimed speaker was silenced by people next to the grave, but some young men and women (as far as I know, Irina Emelyanova among them) requested that people be allowed to say what they wished. Then, someone began reciting Pasternak's famous poem "August," written in 1953 and included in *Zhivago*. It addresses the poet's anticipated death and has strong religious overtones. Many more poems followed.

Hinsey: How was the crowd finally dispersed? What are your other memories of the day?

Venclova: The crowd started to thin after an hour or so. Finally, Virgilijus said to me, "Let's go. Now, there are only KGB agents left, reciting poems to other agents." However cynical that might sound, there was probably a modicum of truth in it. We left for the station and returned to Moscow. I never heard that the crowd was broken up by force: it dispersed on its own.

At Natasha's flat, we held a sort of wake with some of her friends. We drank wine and vodka and recited Pasternak's poems—from memory or from his books, which were abundant in her apartment. The next day, I made a very long entry in my diary but did not save it since it seemed chaotic and unreadable. For some time, I had been keeping a diary, but I stopped on that day—I experienced something like "writer's block," or, to be precise, "diarist's block" for several years afterward.

Hinsey: At the end of his life, in his memoirs, Khrushchev said that he was sorry about how he had behaved toward Pasternak: that he hadn't supported him and had banned *Doctor Zhivago*. He wrote, "My only excuse is that I didn't read the book."

Venclova: Khrushchev was not a reader and formed his opinions about books on the basis of information provided by his entourage. In this, he differed from Stalin who read widely, not necessarily to the benefit of the authors he acquainted himself with. It is generally believed that Khrushchev was not without human feeling and could regret his decisions. I have reason to believe that he was sincere in his memoirs about Pasternak. There is a legend that, after Pasternak's death, he asked Tvardovsky, a fairly talented and popular writer: "How about that Pasternak? Is it true that he was such a great poet?" "Do you consider me a good poet?" Tvardovsky responded. "Oh yes," Khrushchev said. "Well, my work isn't worth a penny in comparison with his." Khrushchev supposedly exclaimed, "Oh my God, what an error I have made!"

Hinsey: When you look back on these events, what is your reaction? How has time changed your perception of them? Given the ongoing state of censorship in the world, is there anything we can learn from this?

Venclova: My opinion on the Pasternak affair has never changed, though perhaps I am now slightly more forgiving toward the people who condemned him out of fear, ignorance, and other reasons. One should not judge them too harshly: the totalitarian system was still quite strong at the time, and perfectly capable of mutilating human souls. But the entire affair—the poet's funeral included—represented a watershed in the history of the USSR and cultural resistance in the communist world. Such situations are bound to recur, since tyrannical regimes of various stripes will be present on Earth for the foreseeable future. Still, resistance always pays off, if not immediately, then sometimes in unpredictable ways. □

THE HOLBROOKE FORUM

The Richard C. Holbrooke Forum for the Study of Diplomacy and Governance, established by the American Academy in Berlin in memory of its founder, Ambassador Richard C. Holbrooke, has continued to bring together German and international experts on a number of global issues in 2015. The Forum was established in December 2013 with an inaugural gala at the Metropolitan Museum of Art in New York City.

Since then, the American Academy in Berlin has hosted two workshops: one in June 2014 called "Statecraft and Responsibility," and another last December called "Peace and Justice." Both were co-chaired by Michael Ignatieff, of Harvard Kennedy School, and Harold Hongju Koh, of Yale Law School.

THIS YEAR, FROM MAY 11 TO MAY 14, Michael Ignatieff and Harold Hongju Koh convened a third workshop at the American Academy in Berlin. Under the title "Germany, the United States and the Emerging International Order," a group of distinguished European and American scholars, policy-makers, and jurists discussed recent fissures in German and American approaches to maintaining international order, as well as transatlantic efforts to confront challenges in the international arena. Germans and Americans have struggled recently to find agreement on joint responses to international crises, most obviously in the case of Ukraine and Russia, but also on strategies for dealing with other actors, such as China. The workshop also focused on ways to re-establish transatlantic cohesion and was augmented by an exchange of views with senior German policy-makers.

This summer, the American Academy will host the first Richard C. Holbrooke Forum retreat, entitled "Authoritarianism in a Global Context." A group of scholars, with distinct regional and historical expertise in the field of authoritarianism, will assemble for three weeks under the chairmanship of Martin K. Dimitrov, a political scientist from Tulane University who was a fellow at the American Academy in spring 2012. The retreat will take a new approach to exploring the reasons behind the persistence of autocracies by working across disciplinary and regional boundaries. In daily presentations and regular exchanges with German colleagues, retreat participants will discuss the various strategies pursued by autocracies in Asia, the Middle East, and Eastern Europe to gain popular support.

The American Academy is likewise planning a series of workshops, to commence in fall 2015, called "The New Strategic Triangle—United States, China, Germany—and the New World Order." Designed by Ambassador John C. Kornblum, the Strategic Triangle is to offer a new framework for the understanding of state interaction and interdependence in the modernized and digitalized world of today. The United States, China, and Germany offer different examples of countries that appear to have adapted their economies successfully to the technological age, but which have done so in different ways. The first conference will focus on global networks and integration, bringing together experts from international trade, information technology, and logistics. Building on these discussions, a follow-up conference, planned for spring 2016, will explore the geopolitical and economic consequences of global networks and integration for the Strategic Triangle states. The conference will bring together experts with in-depth knowledge of the United States, China, and Germany. □

Long March

The persistence of
authoritarianism
in a global context

by Martin K. Dimitrov

THE 1980S AND 1990S were a time of optimism about the "end of history" and the global spread of democracy. Today, the mood among scholars and practitioners is pessimistic. Freedom House, a think-tank that monitors progress toward democracy, classified 46 percent of countries in the world as "free" in 1998. Nearly two decades later, following momentous events like the color revolutions and the Arab Spring, the proportion of free countries has not changed: in 2015 free polities still constitute only 46 percent of the countries in the world. These statistics indicate that authoritarianism has proven to be much more resilient than it looked in the *annus mirabilis* of 1989. Moreover, for nine consecutive years, more countries have suffered declines in their aggregate Freedom House scores than registered gains. These indicators reveal the slow but steady erosion of the spread of democracy.

What explains the global persistence of authoritarianism? Why is it that the fall of the Berlin Wall and the Arab Spring have resulted in the consolidation of democracy only in some countries but the persistence of autocracy in others? And, finally, why has a cluster of countries, key among them being China, survived the fall of communism in Europe, the breakup of the Soviet Union, the color revolutions in the post-Soviet republics, and the Arab Spring without experiencing regime collapse?

Despite their theoretical importance and clear relevance to policymakers, no definitive answers have been provided to these questions. Recent studies of authoritarianism have typically pursued two different lines of inquiry. Some have emphasized regime origins, arguing that autocracies that emerge through a revolution are more durable than those that are established through coups or foreign imposition. Others have identified various factors that account for regime collapse. These endpoints in the lifespans of autocracies are important. Nevertheless, we also need to pay attention to the techniques through which autocracies maintain themselves in power, sometimes over multiple decades of rule.

Engineering Popular Support in Autocracies

Although some regimes never develop strategies for engineering popular support, long-lasting autocracies gradually become aware that their ongoing survival cannot be predicated on the use of repression alone. Repression is costly because its effective deployment requires the maintenance of a large security apparatus. But of considerably greater concern for autocrats is that repression can ultimately undermine their rule by occluding the actual state of discontent in society—after all, when levels of fear are high, nobody dares speak the truth, even when most citizens oppose the regime. This can lead to unanticipated revolutions, which are an autocrat's worst nightmare. For this reason, resilient autocracies develop mechanisms of governance that allow them to use repression selectively. From the point of view of autocrats, the utility of the strategies for engineering popular support analyzed in this essay is that they can generate mass compliance, thus allowing for the more efficient monitoring of discontent and for the deployment of targeted and infrequent repression.

The strategies for engineering popular support were pioneered by communist regimes in Eastern Europe following unanticipated system-destabilizing events like the June 1953 worker uprising in East Berlin, the 1956 Hungarian revolution, and the 1962 Novocherkassk riots in the Soviet Union. These protests revealed the precarious state of social stability and required a reorientation toward governance techniques that would both increase compliance and would also allow for discontent to be detected prior to its expression as an overt challenge to the regime.

Popular support was secured through a three-pronged strategy. One element of the strategy was the deployment of what scholars of communist regimes have referred to as the "socialist social contract," which involved an implicit bargain that the masses would remain politically quiescent in exchange for increased social spending and efforts to satisfy popular consumption preferences. Another was the promotion of elections with a modicum of choice and other mechanisms of limited accountability such as letters to the editor and citizen complaints (*Eingaben*). And the third focused on substituting the moribund Marxist-Leninist ideology for a more potent ideological mix that included nationalist propaganda, personality cults, and certain types of mass campaigns. Cumulatively, these strategies ensured the compliance of the overwhelming majority of the population. This meant that the coercive apparatus could focus on monitoring extensively those citizens who continued to oppose the regime and on meting out carefully targeted punishments against them.

Although techniques of governance combining selective repression with social spending, limited accountability, and nationalism were first introduced in post-Stalinist communist regimes, they have been used in a range of non-communist autocracies, such as Taiwan under the KMT, Egypt under Mubarak, and Venezuela under Chávez. A case that deserves special note is contemporary Russia. For the past fifteen years, Putin's regime has survived by executing or jailing its most vocal critics but also by carefully maintaining some of the social spending commitments of the socialist period (*l'goty*), by preserving semi-competitive elections and reinvigorating the institution of

citizen complaints (*obrashcheniia*), and by promoting a virulent brand of Orthodox anti-Western homophobic Russian nationalism. These comparative examples suggest that the strategies for engineering popular support discussed in this essay are used in a wide array of autocracies.

Engineering Popular Support in China

The persistence of single-party communist rule in China more than a quarter of a century after the fall of the Berlin Wall presents a puzzle for social scientists. This essay argues that China's survival formula involves the three-pronged strategies for engineering popular support outlined above, combined with limited repression that targets ethnic minorities and political activists like Nobel Prize winner Liu Xiaobo or democracy activists Chen Guangcheng and Teng Biao.

With regard to social spending, China learned both from the domestic unrest that accompanied the initial attempts to dismantle the urban socialist social contract prior to 1989 and from the devastating impact of the social transition following the wake of the collapse of communism in Europe. The dismantling of the socialist social contract for urban workers only began in the late 1990s, when various social policies were introduced to soften the transition for workers who were laid off. The 2000s and 2010s saw an expansion of the social safety net through the introduction of policies such as the minimum-living guarantee (*dibao*), which supplied means-tested financial assistance to those who were worst affected by the transition; the rolling out of the New Rural Cooperative Medical System (*xinxing nongcun hezuo yiliao zhidu*) and pensions for rural residents; and the expansion and standardization of various health insurance, pension, and unemployment insurance schemes for urban residents. The promulgation of the Labor Contract Law in 2008 and of the Social Security Law in 2010 strengthened existing protections and provided legal recourse to citizens who were wronged.

China has also introduced limited accountability by promoting grassroots elections, by experimenting with democratic consultations (*minzhu ketanhui*) and with public notice-and-comment during legislative drafting, and by allowing public interest litigation. The central government has also promoted citizen complaints (known as letters and visits or *xinfang*) and has been generally accommodating to citizens participating in small-scale protests, when their demands have focused on welfare and social insurance matters. At the same time, large-scale demonstrations have not been tolerated, ethnic Tibetan and Uighur unrest has been ruthlessly suppressed, and political activists have been subject to harassment, arrest, and imprisonment. The message that these tactics send is clear: Chinese citizens who avoid crossing the red lines can lead relatively content, ordinary lives.

Beyond promoting limited accountability, the regime has also engaged in an ideological reorientation away from the precepts of Marxism-Leninism. Some of the steps have involved recovering the essential elements of Maoist governance practices, such as reviving elements of the Mao cult, resuscitating "red songs," and continuing to organize occasional mass-mobilization campaigns. The regime has also promoted nationalism, both by taking a more aggressive stand in international relations and by advancing the concept of the "Chinese Dream" (*Zhongguo meng*), which involves national rejuvenation, military modernization, and improved standards of living.

Whither China?

The future of the global persistence of authoritarianism depends to a large degree on China. If China were to experience regime change, this would have profound implications for democracy promotion around the world. Thus far, the strategies for engineering popular support have worked to sustain the Chinese regime well into the twenty-first century. However, the experience of other countries that have used similar strategies provides several lessons for China. One is that these strategies are contingent on high-level economic growth, which is necessary to maintain social spending. Another is that the systems of accountability require the maintenance of consistent responsiveness. And the third is that nationalism may eventually speed up the process of regime disintegration, should ethnic minorities feel stigmatized by the majority. All of this suggests that authoritarianism in China is a lot more fragile than some might think. This in turn indicates that the ongoing global persistence of authoritarianism is far from a foregone conclusion. □

Is the Third Wave Over?

by Stephan Haggard and Robert Kaufman

IN HIS 1992 BOOK, Samuel Huntington coined one of the most widely recognized metaphors in recent social science. Writing in the wake of the fall of the Soviet empire, he argued that we were living through a Third Wave of democratization. The first wave saw the gradual extension of the franchise in Europe, then the late nineteenth century push toward universal voting rights for men, and with the suffrage movement, the incorporation of women too. This wave was reversed by the developments of the inter-war period, before surging again in the aftermath of World War II. That second wave also crested with the failure of democracy in a number of newly independent countries as well as a novel developmental authoritarianism

in Latin American and Asian countries such as Chile and Korea.

Beginning in Southern Europe in the mid-1970s—in Portugal, Spain, and Greece—the Third Wave spread to major Latin American and Asian countries in the 1980s: Brazil, Argentina, Mexico, Turkey, the Philippines, Taiwan, Korea, and Thailand. The trend accelerated dramatically in the aftermath of the fall of the Berlin Wall, and not only in Eastern Europe but also in the poorer nations of the African continent as well.

More recently, the "color revolutions" in Georgia, Ukraine, Kyrgyzstan, and Lebanon, and the Arab Spring evoked hope that the former Soviet Union and the Middle East would more fully participate in the worldwide trend. But these movements sputtered, and a number of other countries that had seemed to cross democratic thresholds appeared to move backward. Nor were these cases trivial; they included outright reversions to authoritarianism in Thailand, Venezuela, and Russia and ambiguous cases of what we call "backsliding" in countries as diverse as the Philippines, Hungary, Turkey, Kenya, and Pakistan.

End of the Third Wave?

Is the Third Wave over? And if so, what accounts for the fact that it has crested? Before trying to answer this question, it is important to acknowledge that we actually don't have a clear consensus on what we mean by democratic transitions and reversals. A minimalist definition would include the staging of competitive elections and a turnover of government, and for a number of countries this is in itself a significant accomplishment. A more robust definition would encompass checks on the executive and, above all, strong protection of political rights and civil liberties.

Yet by either definition, things do not look good. For over a decade after it was written in 1992, Huntington's book continued to be prescient. The collapse of state socialism did in fact extend the wave of transitions, and the total number of democracies

continued to march upward through the mid-2000s. But the cases of democratic failure listed above do in fact reflect some more general patterns. First, the total number of democracies appears to have peaked at about 120 countries—depending on definition—and has now fallen back slightly.

Second, while the number of outright autocracies—regimes such as Sudan or North Korea—has fallen steadily, so-called "competitive authoritarian" regimes have proven surprisingly resilient. Such governments maintain a façade of democratic practice, including elections, which in fact mask executive overreach, corruption, and the deterioration of civil and political liberties. Rather than being way stations in the march of history, they have survived, often enjoying wide public support.

Third, the simple total of democracies in the world masks increased churning. The rate of democratic breakdown since 2000, roughly the mid-point in the Third Wave, is almost twice that of the rate of breakdown from 1985 to 2000.

And finally, of course, outright autocracy is by no means dead. China potentially provides an influential alternative model in many parts of the world.

As democracy is complicated and social science is competitive, there are, of course, a plethora of theories seeking to understand this trend. It is doubtful that any one approach can do it justice. But we are learning some things, including about the features of the international environment, that might matter.

Is Inequality to Blame?

First, some null findings. The concern about democracy has overlapped with growing anxiety about the increase in inequality across the world. Although some large countries such as Brazil have seen a decrease in inequality, the general trend is in the other direction. Some countries that have reverted, including Thailand, have seen rapidly rising income disparities. A recent body of important theoretical work by

economists and political scientists has argued that inequality might be bad for democracy, leading to outright or subtle reversions.

The story goes like this: Democracy provides the opportunity for masses to redistribute income. Since the poor outnumber the rich, they can—in effect—vote themselves a raise. Economic elites respond by shutting down or limiting competitive politics in order to protect their wealth.

This story is not implausible, and there are both historical cases—such as the authoritarian installations in the Southern Cone of Latin America in the 1960s and 1970s—that appear to fit the pattern. Yet in a large study including both statistical analysis and detailed casework, we found no relationship between inequality and outright reversion to authoritarian rule, nor evidence that distributive conflicts were implicated in the fall of democracy. Of course there are a handful of cases that appear to fit, such as Thailand's polarization between yellow and red shirts, the populism of Hugo Chávez, and perhaps even the events in Egypt. We cannot rule out more insidious and subtle effects of inequality on politics, including in the United States. But as a general rule, high inequality does not appear to directly threaten the stability of democratic rule.

Second, poverty is not a necessary barrier to more open politics either. In our studies, we did find a statistical correlation between level of income and the likelihood of reverting to authoritarian rule; poor countries were—on average—more vulnerable. But this statistical generalization hid a lot of anomalies: poor countries—including in Africa—that had managed more open politics. Examples include Benin, Senegal, Indonesia, Mongolia, and, somewhat more tentatively, the post-civil war countries of Central America such as El Salvador, Guatemala, and Honduras.

This point is extremely important because it speaks to the debate sparked by Singapore's recently deceased Lee Kuan Yew about developmental authoritarianism. Poverty should not be seen as an excuse for dictatorial

rule; the poor deserve freedoms too. A wide body of social science research also has demonstrated that for every developmental authoritarian regime such as the Asian cases of Singapore, China, and Vietnam, there are an equal, if not greater, number of authoritarian debacles, including the Romania of Ceaușescu, the Haiti of the Duvaliers or the Zaire of Mobutu. Moreover, it is worth noting that important Asian developmental states such as Korea and Taiwan, have transited to democracy with little ill effects on economic growth.

A final null finding concerns the role of the military in politics. Our standard image of authoritarian reversion has long been the coup. Taming the military has been one of the most difficult tasks of democratic rule. Providing support for the professionalization of militaries has not received the attention from the international financial institutions and aid donors that it deserves. But despite cases such as Pakistan, where the military is currently encroaching more and more visibly into politics, the threat of coups has actually declined dramatically, including in Africa.

However, this has only meant the rise of a new threat to democratic rule that is more difficult to control: the erosion of democracy "from within" by overreaching executives. An increasingly common pattern is an executive that exploits majoritarian features of democracy. These autocrats—often populist and increasingly nationalist in ideology—win not only majorities but large majorities. These allow presidents to weaken institutional checks on their authority and aggressively undermine oppositions. Again, these patterns can be seen across the world, visible in countries as otherwise disparate as Turkey, Hungary, Russia, and Venezuela.

Tempering Aspirations

What can be done looking forward? We should temper our aspirations; outsiders play only a limited role in the democratization process, particularly in larger countries, which are more immune from outside influences. Some of the impetus will need to fall on domestic political processes. We know, for example, that constitutions have an effect. Restraints on executive discretion—from independent electoral commissions to ombudsmen and anti-corruption agencies—all serve to reduce the risk of imperial presidencies. It is particularly important to strengthen the powers and capabilities of legislatures, which often operate at severe disadvantages vis-à-vis executives. Important new work by Ethan Kapstein and Stephen Fish and their colleagues suggests that restraints on executives and strengthened legislatures help.

But there is also advantage in simplicity. A number of new studies of Africa have shown that rules as simple as term limits can have very strong effects on the likelihood of democratic breakdown.

In the end, however, civil society must also act as a check on overweening authority; institutional design is not enough. "Parchment institutions" may be overridden. Despite the failures of the mass uprisings in Egypt, our studies show that peaceful mass mobilization can act as a check on authoritarian malfeasance. We found that democratic transitions that took place as a result of protest from below had somewhat more robust democratic histories than those that resulted from bargains among elites.

What about the international community? A strong finding in our work is that neighborhood effects matter. The countries of Eastern Europe—and some beyond it—have benefited enormously by proximity to Western Europe and strong democratic norms in the European Community. Latin America is now developing similar norms and the Organization of African Unity has recently developed a norm not to seat military governments that have overthrown democratic predecessors.

The Middle East—with the former Soviet Union—are the two regions that are most generally immune from the democratic trend. Obviously, one of the first places to start is to improve the neighborhood by robust efforts to bring severe civil conflicts to an end. This injunction holds with respect to contagion from civil conflict and terrorism in both East and West Africa as well. In work with Lydia Tiede, we showed that the end of civil war does not necessarily lead to sharp improvements in the rule of law; countries tend to revert to their status quo ante. But for countries that are wracked with violence on the scale of Syria, that would be a marked improvement, permitting the battle for democracy to be picked up another day. A number of post-civil war cases—from Central America to African countries such as Sierra Leone—carry hopeful messages with respect to outside intervention.

A second finding of import is the role that economic crises appear to play in reversions from authoritarian rule. The statistical analysis is not completely firm on this point. But there are ample cases in which the prospects for democracy were dimmed by daunting crises. That Greece has survived its wrenching experiences over the last five years should not be taken for granted, and it can by no means be assumed that democracy is completely safe there. Partners, donors and aid agencies need to evaluate their assistance to countries such as Greece not only on economic grounds but with an eye toward the long-run risks of blowback and the erosion of democratic rule.

So is the Third Wave over? As the debate over climate change shows, long-run inflections in complex social and natural phenomena are hard to identify and predict. The very success of the Third Wave may partly explain the current stall: as more countries democratize, those remaining are, virtually by definition, harder nuts to crack. But the pause is real enough—and worrying enough—that the advanced industrial states need to reinvigorate their thinking about democracy. The benefits it provides accrue not only to those that live under it but to their neighbors as well. □

NOTEBOOK

WIPE

DURING THE 'WIPE'
BETWEEN THE TWO STATES
('BREATH' GIVING WAY
TO 'TURNING UNDER')
(SEE FRAMES IN PREVIOUS
BOOK)

DURATION OF WIPE:
60 SECS?

DISSOLVES (ALTERNATE TRANSITION):

- BREATH IN PLACE
- FADE-UP 'TURNING UNDER'
= BREATH/TURNING UNDER 'MASH'
- FADE DOWN BREATH
- TURNING UNDER IN PLACE
- FADE-UP BREATH
= TURNING UNDER/BREATH 'MASH'
- FADE DOWN 'TURNING UNDER'

'BREATH'/'TURNING UNDER' MASH
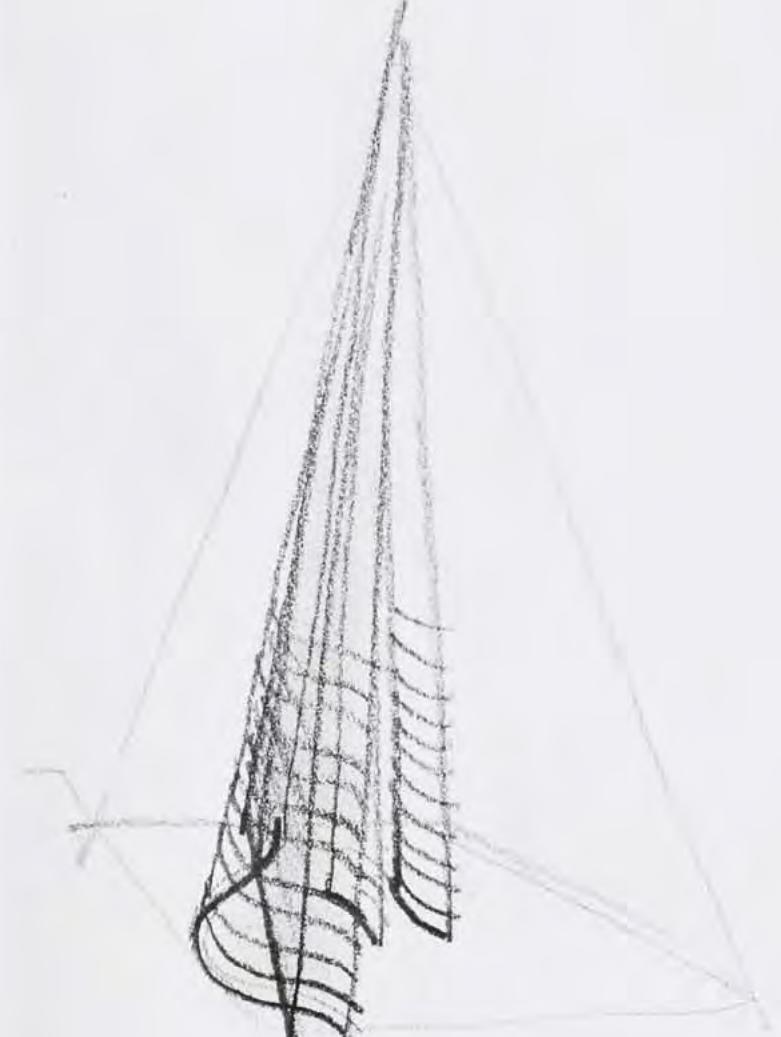
WIPES, WITH GRADUALLY INCREASING
OVERLAPS, SUCH THAT THE FINAL
TRANSITION IS ALL TRANSITION—WITH
BOTH FORMS FULLY PRESENT SUPERIMPOSED
OVER ONE ANOTHER

Anthony McCall. *Large Notebook 4*
(November 17, 2004 – July 20, 2011). Study for
"Exchange," 2005. Photo by Jason Wyche.

WELCOMING GERHARD CASPER

On this frosty January evening, everything is different at the American Academy. For over fifteen years, Gary Smith stood at the entrance to the small foyer, then at the lectern, to greet the guests and welcome the new class of fellows. He was the heart of this institution dedicated to German-American friendship and transformed it into a vital center of debate on transatlantic relations and a principal venue for current American literature, arts, and humanities. Last year he announced his resignation as executive director of the Academy.

Now standing at the lectern is the new star of the American Academy, Gerhard Casper. A prominent expert in US constitutional law, the German-American is best known for his eight-year tenure as president of Stanford University, which he guided out of a crisis in the early 1990s and on to renewed prestige and influence. The publisher and political commentator Josef Joffe, who is on the Academy's board of trustees, introduces the Hamburg native with glowing praise for his career and his work in preparing to take the helm at the Academy—not failing to mention, of course, the $2.2 billion Casper raised for Stanford during his time at the university. At the American Academy, this is a highly valued complementary skill.

While surely accustomed to such accolades, Casper exemplifies Hanseatic modesty. An example, as described by Joffe, was his reaction to the students calling "Gerhard, Gerhard" at his Stanford farewell: "Thank you for reminding me of my first name," he said. On this evening, too, he fends off such overt devotion. "Terrible, terrible," are his first words following Joffe's laudation. He prefers to talk about

Christian U. Diehl, Gahl Hodges Burt, Gerhard Casper, and Christine I. Wallich. Photo by Annette Hornischer

his pleasure at the opportunity, near the end of his career, to take on this job in Berlin. This is, after all, the city in which his wife was born. Casper, born in 1937, has lived in the US since the 1960s and has become an American citizen. Nonetheless, he still speaks English with a distinct German accent, something many Americans find charming.

The Academy is familiar terrain for Casper, who served on its board of trustees during the first years after its founding in the mid-1990s. Speaking to a smaller gathering in the Academy's library, he says that one need only consider his age to realize that he is merely an interim solution.

Among his most important tasks, he says, will be that of forming a new selection committee to identify a successor with long-term prospects. The efforts of the previous committee failed when the chosen candidate turned down the position after months of negotiations. But the new president, who will additionally assume the role of executive director, lauds the Academy as an outstandingly run institution on sound financial footing. Up to now,

the president of the Academy was based in New York and was responsible, above all, for fundraising in the US.

Casper underscores that the Academy's dual missions of fostering both academic excellence and the German-American dialogue are not always easy to pursue in tandem. He acknowledges that the institution's political work may have flagged slightly since the 2010 death of its founder, US diplomat Richard Holbrooke, and says he aims to change that.

While the American Academy has always emphasized its nonpartisanship, it reflects the influence of both Democratic Party supporters and of emigrants from Nazi-era Germany and their families, of left-leaning liberals with an affinity for Germany. As such, Casper's appointment also represents a certain cultural break. He left Germany thirty years later than the families who fled Nazi persecution, and he doesn't come from the Democrats' network. [...]

The aim [of the Academy] was to maintain the close postwar ties that had developed between West Berlin and the US, and to lend these a

new quality. Through collaboration with Henry Kissinger, Richard von Weizsäcker, and others, the project succeeded. Since 1998, grants have been awarded to nearly 400 scholars, authors, artists, and journalists to live and work here for several months. [...]

The Academy strives to ensure that its fellows don't live at Wannsee as if in an ivory tower, but that they explore the city of Berlin. That leads them to have a direct influence on the capital's political and cultural scene, which in turn leaves its imprint on their own work.

Despite the Academy's positive impact over the years, German-American relations outside of the transatlantic community's rather closely knit intellectual circle face formidable obstacles today. The imperial bearing of the US under President George W. Bush after the attacks of September 11, 2001, the inhuman abuses during the Iraq War, the Guantanamo detention camp torture practices, the surveillance methods of the intelligence agencies, the government response to whistleblower Edward Snowden—all of this has hardened into
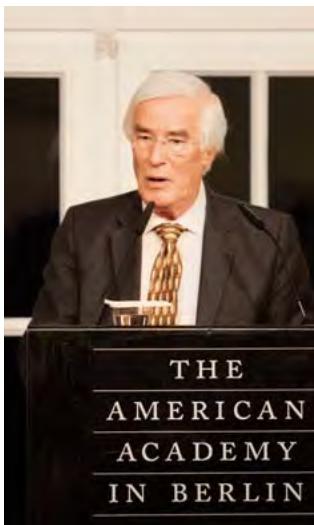
an image of America in the minds of many Germans that leaves little space for friendly sentiment.

Gerhard Casper, 77, is well aware of this. "It's awful to think of almost an entire generation of especially younger Germans shrugging its shoulders and saying: That's how America is, just a big power pursuing its interests by force," he says. In the past, Casper notes, Germans often justly criticized the US, but always against the background of a conviction that Americans themselves wanted, and were working for, a better America.

He sees this underlying trust as having disappeared and says that "changing this again is one of our greatest challenges."

Casper crosses his arms. It is a problem that transatlantic relations are primarily in the hands of people with hair the same color as his, he says, running his hand through his silver-gray thatch and adding, "The younger generation has detached itself from the USA."

He is concerned that the memory of America's fight against the Nazis, the airlift to rescue West Berlin, and even the constructive American role in overcoming the division of Germany—which inspired an interest in, and commitment to, the US in many older Germans—is waning among a generation that can hardly recall the Berlin Wall. It may just be that Gerhard Casper, who has worked with young people all his life, can find a new way of reaching this generation. □

—By Holger Schmale, "Amerika am Wannsee" (excerpt); *Berliner Zeitung,* Jan. 21, 2015; Translated by Michael Dills

2015 HENRY A. KISSINGER PRIZE

The American Academy in Berlin is looking forward to awarding the 2015 Henry A. Kissinger Prize to both **Giorgio Napolitano**, former President of Italy (2006–2015), and **Hans-Dietrich Genscher**, former Federal Foreign Minister and Vice Chancellor of Germany (1974–1992).

The award is given in recognition of President Napolitano's outstanding contributions to ensuring further European integration and stability. Foreign Minister Genscher is being honored for his exceptional contributions toward the peaceful resolution of the Cold War and the reunification of Germany.

Henry A. Kissinger is delighted to be able to personally present the awardees with the prize on June 17, 2015, at the American Academy in Berlin's Hans Arnhold Center.

"These two statesmen's achievements in overcoming historic divisions led to a more united Europe and provided stability during very challenging times," said Professor Gerhard Casper, the designated

Henry A. Kissinger

President of the American Academy in Berlin. "We owe both a debt of gratitude for making political decisions with a view toward strengthening the transatlantic relationship."

The American Academy awards the Henry A. Kissinger Prize every year to Europeans and Americans who have made outstanding contributions to the transatlantic relationship. Past recipients of the award include former US President George H. W. Bush, former German Chancellor Helmut Kohl, and former US Secretary of State James A. Baker, III. □

WELCOMING A NEW TRUSTEE

The American Academy is proud to announce that **George Erik Rupp**, a leader in international development and American higher education, joined the board of trustees in fall 2014. The Richard C. Holbrooke distinguished visitor at the Academy in spring 2014, Rupp serves as a member of the Fellows and Alumni Committee and the Programs and Publications Committee.

A native of New Jersey, Rupp has spent decades in higher education, having served as president of Columbia University and Rice University. He was the dean of Harvard Divinity School from 1979 to 1985. For 11 years, from 2002 to 2013, Rupp served as president of the International Rescue Committee, the aid group helping people whose lives have been shattered by conflict.

After stepping down from IRC, he continues to be an adjunct professor of religion, public health, and international affairs at Columbia University and is still a board member at several additional

not-for-profit organizations. He has also taken on a new set of responsibilities, including as a senior fellow at the Carnegie Council for Ethics in International Affairs, as the chair of the board of the International Baccalaureate Organization, and as founding principal at NEXT, a consulting partnership for academic, cultural, and social service organizations.

Rupp is an expert on similarities and differences within and among religious traditions, including the relationship of religious communities to conflict and post-conflict development. He is the author of numerous articles and five books, including *Globalization Challenged: Conviction, Conflict, Community* (2006). His newest work, *Beyond Individualism: the Challenge of Inclusive Communities,* will be published in September 2015 by Columbia University Press. □

HONORING RICHARD VON WEIZSÄCKER AND THOMAS L. FARMER

The American Academy was saddened by the loss of two founding chairmen at the beginning of this year. Richard von Weizsäcker passed away in Berlin on January 31, at age 94, and Thomas L. Farmer passed away in Washington, DC, on February 5, at age 91. "Their deaths represent a tremendous loss and sadden us greatly," said the Academy's Acting Chairman, Gahl Hodges Burt. "It is fair to say that without them, there would be no American Academy in Berlin. Both were not only vital to establishing the Academy, but they also garnered widespread support and created real enthusiasm for our institution in Germany and the US. We will miss them greatly."
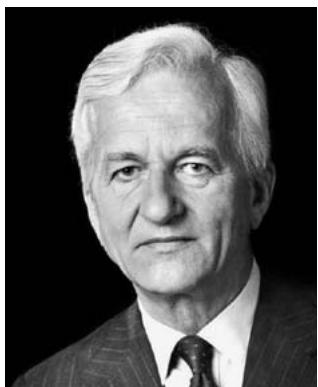
Richard von Weizsäcker

Richard von Weizsäcker was a towering figure in recent German history. Former US Secretary of State Henry A. Kissinger, also a founding chairman of the Academy, called the former German president "one of the great political leaders of our period." Trustee emeritus Fritz Stern offered the following words about President von Weizsäcker in 2007.

"The Federal Republic has been Germany's success story and Richard von Weizsäcker has been one of the main architects of that success. Born in 1920 into an old Swabian-Protestant family, he experienced the German catastrophe and, after his study of law, entered public life at an early age. He joined the CDU and moved from being a member of the Bundestag to being elected President of the Federal Republic in 1984, re-elected in 1990.

The President is required to be above parties, and Weizsäcker by his integrity, dignity, and political wisdom was predestined for that office. He used the office for what it ideally was intended: as the voice of moral authority. The speech he gave on the 40th anniversary of Germany's unconditional surrender is arguably the most important manifesto of the German postwar spirit: a clear acceptance of the crimes of the Nazi regime and a rigorous defense of Germany's attachment to Western-style democracy. That speech must be compared to Willy Brandt's kneeling before the ghetto gates in Warsaw: the spoken and the silent gestures of Germany's acceptance of its anguished past.

By reflection and character, Weizsäcker is at once conservative and liberal, that rare and invaluable mixture of political traditions marked by affinity. After his presidency he has remained a patriotic pedagogue, a mentor, at home and abroad—with a strong commitment to reconciliation with the victims of German injustice. He continues to set a standard of dignity and clarity. He is a superb writer, his themes are global, he is at once a patriot and a citizen of the world.

He was one of the first persons to recognize the great promise of the American Academy and became its early and indispensable supporter. As co-chairman of the Board, he has provided the Academy with counsel and great help, his presence has made it a happier place."

Thomas L. Farmer

Born to German-American parents in Berlin on July 26, 1923, Thomas L. Farmer was an attorney who spent much of his professional life working in intelligence and public service in the US, while maintaining close ties to Germany.

Farmer and his family left Germany for the US in 1933, not long after Hitler had come to power. He entered Harvard College in 1940, where he was a vocal advocate for American intervention in Europe. He graduated in 1943 and, after a stint in the US infantry, was trained at the Pentagon in assessing German military units. Following the end of the war, Farmer helped interview dozens of Wehrmacht officers being held in POW camps in Maryland.

Farmer received a degree from Harvard Law School in 1950 and went to work as a covert operations officer in the CIA's Germany section. Later, following his work on John F. Kennedy's 1960 campaign, Farmer advised the new administration on State and Defense Department appointments. In 1961, he was discreetly involved in the orchestration of the release of a Yale economics graduate student, Frederic Pryor, who had been wrongly jailed by the East German police for espionage. Episodes like these helped to establish Farmer's reputation in Washington as a pragmatic, credible, and effective behind-the-scenes negotiator.

In 1964, President Lyndon Johnson appointed Farmer general counsel to the Agency for International Development, where he helped to create the Asia Development Bank.

Thomas Farmer's decades of involvement in German life, law, trade, and intelligence was known in Washington. In 1994, when Richard C. Holbrooke was ambassador to Germany, he tapped Farmer, along with Henry A. Kissinger and then-Federal President Richard von Weizsäcker, to become a founding chairman of the American Academy in Berlin.

From the onset of his initial engagement with the American Academy in Berlin over two decades ago, Thomas Farmer remained a trusted friend, sought-after counselor, and continuing inspiration. The Academy will miss him and will remain ever grateful for his dedication, wisdom, friendship, and generosity.

PROFILES IN SCHOLARSHIP

Presenting the spring 2015 class of fellows and distinguished visitors

DAIMLER FELLOW

Bruce Ackerman is Sterling Professor of Law and Political Science at Yale University and an influential voice in the fields of constitutional law, environmental law, and political philosophy. In 2010 he was named a Top 100 Global Thinker by *Foreign Policy* magazine. In his Academy project, "A General Theory of World Constitutionalism," Ackerman is developing a new framework for understanding the proliferating constitutionalisms of this century.

ELLEN MARIA GORRISSEN FELLOW

Mary Jo Bang is the author of six books of poems. Her work has also appeared in the *Paris Review, New Yorker, New Republic, Yale Review, Denver Quarterly, Best American Poetry*, and elsewhere. Her Academy project is entitled "The Bauhaus: A Study in Balance," for which she is writing lyrical responses to documents, photographs, and drawings related to the Bauhaus and Russian Constructivist art movements. She is currently a professor of English at Washington University in St. Louis.

GUNA S. MUNDHEIM FELLOW IN THE VISUAL ARTS

Sanford Biggers creates artworks that integrate film, video, installation, sculpture, drawing, original music, and performance and he draws on a wide variety of influences, from Buddhism to hip-hop. His works are in the permanent collection of such museums as the Museum of Modern Art, Walker Art Center, and the Whitney Museum, and he has participated in shows around the world. He is an assistant professor in the School of Arts at Columbia University.

MARY ELLEN VON DER HEYDEN FELLOW IN FICTION

Tom Drury is a writer living in Brooklyn whose fiction has appeared in a wide variety of publications including the *New Yorker*, *A Public Space, Ploughshares,* and *Granta*. He has written several highly acclaimed novels and in 2002, *GQ Magazine* cited his 1994 novel *The End of Vandalism* as one of the best American novels of the past 45 years. At the Academy, Drury is drawing upon the Faust legend to explore ambition, manipulation, and moral trade-offs in a more or less contemporary setting.

JOHN P. BIRKELUND FELLOW IN THE HUMANITIES

Siyen Fei is a professor of history at the University of Pennsylvania whose primary focus is on the political and cultural activism of sixteenth- and early seventeenth-century Ming dynasty China. She is at the Academy to finalize a new book, *Sexuality and Empire: Female Chastity and Frontier Societies in Ming China (1368–1644)*, about the notion of identity in China.

DIRK IPPEN FELLOW

Jeffrey Goldberg is a journalist, author, and staff writer for the *Atlantic*. He has worked as a staff writer for the *New Yorker* and has reported from across the Middle East. His 2006 book *Prisoners: A Story of Friendship and Terror* was named a top book of the year by the *New York Times,* the *Los Angeles Times,* and the *Washington Post.* At the Academy, he is embarking on a new book project on the Middle East in light of the presidency of Barack Obama.

GERMAN TRANSATLANTIC PROGRAM FELLOW

Karen Hagemann is James G. Kenan Distinguished Professor of History at the University of North Carolina at Chapel Hill. A scholar of modern European history, Hagemann focuses on gender and women's history, cultural and social history, and the history of the military, war, and the nation. While at the Academy, Hagemann is working on a new monograph entitled *Women, War, and the Military in the Age of World Wars.*

NINA MARIA GORRISSEN FELLOW OF HISTORY

Christopher D. Johnson, is research associate for the "Bilderfahrzeuge: Aby Warburg and the Future of Iconology" project at the Warburg Institute. He has previously taught at UCLA, Harvard University, and Northwestern University. Johnson's Academy project, "Encyclopedic Kinds and Circles of Learning in the Late Renaissance," investigates the diverse genres that sought to find, order, and transmit encyclopedic knowledge in the late Renaissance.

ANNA-MARIA KELLEN FELLOW

Nathaniel Levtow is associate professor of religious studies at the University of Montana and the author of *Images of Others: Iconic Politics in Ancient Israel* (2008). Levtow's research integrates the study of biblical literature with the cultural history of the ancient world. His Academy project is entitled "Text Destruction in the Bible and the Ancient World," and will become the first book to catalogue and explain literary and archaeological evidence for strategic acts of text destruction in antiquity.

BOSCH FELLOW IN PUBLIC POLICY

Evgeny Morozov is a leading thinker on issues pertaining to technological development and digital data. His work has been widely published and his monthly column appears in several European papers. His first book, *The Net Delusion: The Dark Side of Internet Freedom*, was a *New York Times* Notable Book of 2011. While at the Academy, Morozov will be looking at the social and political implications of the "Internet of Things" and at new models for data ownership.

INGA MAREN OTTO FELLOW IN MUSIC COMPOSITION

Elliott Sharp is a composer, performer, and producer based in New York City. He has been active in experimental music, improvisation, jazz, and contemporary composition for over three decades. Sharp leads the ensembles Orchestra Carbon, Terraplane, and Tectonics, and has pioneered ways of applying fractal geometry, chaos theory, and genetics to musical composition. During his stay at the Academy, Sharp is composing *Substance*, an opera about the philosophy and life of Baruch Spinoza.

HOLTZBRINCK FELLOW

William Uricchio is a professor of comparative media studies at the Massachusetts Institute of Technology. In his research, he revisits the histories of old media when they were new, algorithmic enablements of participatory cultural forms. At the Academy, Uricchio will continue to explore how algorithmic mediation is fundamentally changing numerous domains, in particular how they intervene in and transform the subject-object relationship upon which "the modern" has been built.

AXEL SPRINGER FELLOW

Tomas Venclova is a renowned literary scholar and Soviet-era dissident who taught poetry and modern Lithuanian, Russian, and Polish literature at Yale University. His widely translated poetry is recognized as some of the most influential Lithuanian writing of the twentieth and

twenty-first centuries. In his Academy project, "A History of Lithuania—Between East and West," Venclova continues exploring Lithuania and its relationship to American and European historical events.

SIEMENS FELLOW

Sean Wilentz is a professor of history at Princeton University and the highly acclaimed author of several books on American cultural history and politics, from the Revolution to the present. His book *The Rise of American Democracy: Jefferson to Lincoln* (2005), was awarded the Bancroft Prize and was a finalist for the Pulitzer Prize. At the Academy, Wilentz will reevaluate the political history of antislavery prior to the Civil War.

RICHARD VON WEIZSÄCKER DISTINGUISHED VISITORS

Jagdish N. Bhagwati is a professor at Columbia Uni-

versity and a Senior Fellow in International Economics at the Council on Foreign Relations. He has served as an economic advisor to the United Nations and the World Trade Organization. **Padma Desai** is the director of the Center for Transition Economies at Columbia University and is also a member of the Council on Foreign Relations. She has published extensively on Russian economic reform.

STEPHEN M. KELLEN DISTINGUISHED VISITORS

Thomas L. Friedman is an internationally acclaimed journalist and three-time Pulitzer Prize recipient. He is the author of *The World Is Flat: A Brief History of the Twentieth Century* and *From Beirut to Jerusalem*, among others. **Mervyn Allister King** is a former governor of the Bank of England. In 2013, he was appointed a life peer by Queen Elizabeth II. He is also a Knight

Grand Cross of the Order of the British Empire and Fellow of the British Academy.

RICHARD C. HOLBROOKE DISTINGUISHED VISITOR

Laurence Kardish spent 44 years as the curator for film and cinema at the Museum of Modern Art. For his work on German Cinema, Kardish was awarded a *Verdienstkreuz am Bande* in 1999 and a Berlinale Kamera in 2006. In 2013, he received the National Society of Film Critics Award.

KURT VIERMETZ DISTINGUISHED VISITOR

Lawrence H. Summers served as US secretary of the treasury in the Clinton Administration and is a former chief economist of the World Bank. He was director of the National Economic Council for the Obama Administration. He now holds the Charles W. Eliot University Professorship at Harvard.

BOOK REVIEWS

MAP OF BETRAYAL
BY HA JIN

Pantheon
November 2014, 304 pages

A Review by
Brittani Sonnenberg

"A spy, like a writer, lives outside the mainstream population. He steals his experience through bribes and reconstructs it," said the novelist David Cornwell (better known by his pen name, John le Carré), in a 1965 interview. Years later, in another interview, he elaborated on this doubleness: "I think there is a theme in my work, to do with deceit, which says . . . to act is to betray. That the individual identity is really irreconcilable with any

collective behavior. And that's probably just the posture of the outsider."

Ha Jin's slim 2008 work of nonfiction, *The Writer as Migrant,* both echoes and adjusts Le Carré's equation. For Jin (who also uses a pseudonym; his real first name is Xuefei), to *write* is to betray: "The ultimate betrayal is to choose to write in another language. . . . This linguistic betrayal is the ultimate step the migrant writer dares to take; after this, any other act of estrangement amounts to a trifle." Yet a few sentences later, Jin bangs the gavel again, shifting the blame. "Historically, it has always been the individual who is accused of betraying his country. Why shouldn't we turn the tables by accusing a country of betraying the individual? . . . The worst crime the country commits against the writer

is to make him unable to write with honesty and artistic integrity."

Seen through this lens, China has been betraying Jin for almost 30 years, since Tiananmen Square, when Jin decided he "couldn't accept" the government's brutal response and opted to stay in the United States, where he was pursuing graduate studies (China has since repeatedly denied his visa requests). And Jin, according to his initial definition of betrayal, has been cheating on China since his first book in English, *Between Silences,* a book of poetry, published in 1990. His most recent novel, *A Map of Betrayal,* posits a transitive melding of Le Carré's and Jin's formulations above: not the writer as spy, or the writer as migrant, but the migrant as spy, the spy as migrant.

A Map of Betrayal chronicles the rise and fall of Gary Shang (inspired by the real-life spy Larry Chin), whose fate is revealed on page one, where Gary is introduced as: "the biggest Chinese spy ever caught in North America." Don't cue the *Mission Impossible* theme song: the trajectory of the novel is not how Gary will triumph, but how Gary will fail. Lillian, Gary's 54-year-old daughter, a historian, narrates the novel, some thirty years after his death.

We witness Gary's hapless journey from a minor spy posing as a translator to a high-level mole imbedded in the CIA in Washington, DC. Thrilled by Gary's easy access to classified American documents, his higher-ups deny his requests to return to his wife and village in China and urge him to start another family in the US. Thus, Gary embarks on his second arranged marriage: he weds Nellie, a waitress at a local diner, and they have one child: Lillian.

In the half-Chinese, half-American Lillian, Ha Jin offers us a narrator who readily confesses her unreliability, which she feels to be her inauthenticity: neither fully American nor Chinese, with a cipher for a father. Lillian relies on primary documents to piece together a picture of Gary; but we are never presented with Gary's diaries, only Lillian's interpretation of them. Gary's voice, muted throughout his life, has once again been appropriated: his daughter speaks for him, just as his handler, Bingwen, spoke for him in China. It is precisely this voicelessness—which can be compared to the exiled writer's refusal to write in his own tongue (though Gary's silence stems from his devotion to the Chinese government, and Jin's literary silence, in Chinese, stems from his rejection of the same)—that represents the wound that won't heal. *A Map of Betrayal* is both a searing critique of, and a love letter to, modern China.

Jin holds no punches criticizing what he sees as his native land's grave moral and tactical errors, as told through Gary's and Lillian's skeptical appraisals: from Mao's stubborn, disastrous agricultural policies in the late 1950s, which Gary witnesses from Washington, DC, thanks to Taiwanese intelligence; to the social unrest and widespread pollution that Lillian observes on her teaching trip in China.

My favorite scene occurs during a speech that a technocrat, Professor Wei Fang, loyal to the party, delivers at a Chinese university on "Managing China's Cyberspace." Jin's physical description of the professor is downright Dickensian: "A smile played on his pudgy face while his beady eyes almost disappeared. He was small-boned but heavy-fleshed. His hair, dyed raven black, was so lustrously gelled that it might have been too slippery for a fly to land on."

As Fang launches into a fatuous ode to China's "glory, frustration, and gratification" in "protecting our national sovereignty in cyberspace," the students begin shouting insults and hurling shoes and eggs onstage. Fang is hastily escorted offstage by guards, but not before he bellows back at his detractors: "You will all face legal consequences! You'll be kicked out of college! Damn you, I'll get back at you!"

"His voice," Lillian tells us, "was booming through the lavalier mike still on his lapel while he waved his hands, giving the audience the finger and for some reason also the victory sign." The discredited professor's protests along with his confused hand-gestures, comically evoke his helpless hubris. Professor Fang is presumably being ushered to a luxury sedan, but his swift exit eerily echoes the humiliation and execution of professors during the chaos of the Cultural Revolution. Since the incident takes place a few days before the anniversary of Tiananmen Square, Lillian explains, the authorities choose not to punish the students, unwilling to raise tensions at such a sensitive time, but there is a lingering suggestion of unease and imminent violence from both sides, a recurring shiver throughout the novel.

Despite the globe-trotting tendencies of its characters *A Map of Betrayal* is not a cosmopolitan novel. Gary and Lillian may feel the urge to move between countries and cultures, but their nomadic desires are checked by China's police state. Unable to return to his native land during the Cold War, Gary is forced to observe China from a distance, fed only by intelligence from Taiwan and a single photo of his family. When Lillian travels to China, she worries about the police following her activities, and her relatives receive official warnings about staying in touch with her. Unlike a breezily post-nationalist novel like Joseph O'Neill's recent *The Dog,* set in Dubai, China as nation state—its troubled birth, its recent economic rise, its jealous policing of its citizens—is the central, inarguable fact in *A Map of Betrayal*.

That said, aching passages that describe Gary's homesickness evince a still-throbbing love for a gentle, bucolic China (though noticeably de-peopled): "Did he always remember the streets of his village and the trails on the mountain slopes and along the rivers that used to be frequented by cranes, herons, mallards? And the endless chestnut groves on the hills? And the temples and shrines on the lakes?" Moreover, the new generation of privileged Chinese that Lillian encounters—hungry for outside knowledge and exchange, proud of China's emerging expertise, experimental and artistically inclined—shed light on profound change in mainland China, although Jin himself has had to observe these unfoldings, like Gary, from afar.

In the closing lines of *Writer as Migrant,* Jin suggests that writers "rearrange the landscapes of our envisioned homelands" in order to integrate past and present. *A Map of Betrayal* honors this aesthetic approach, as a rearranged landscape of Jin's envisioned China: reviled, beloved, and, like the most painful of severed family ties, ultimately unreachable. In capturing this hunger for home and the precarious nature of mixed loyalties, Jin corrects the blithe rhetoric of cosmopolitanism, reminding us that, for many, to leave home once is to leave it forever. What comes in its stead will be an internal compromise, a hovering in-between, an unmappable locale. □

THE GENEALOGY OF A GENE: PATENTS, HIV/AIDS, AND RACE
BY MYLES W. JACKSON

MIT PRESS
February 2015, 344 pages

A Review by
Jonathan Kahn

Gene patents are odd things. First of all, they aren't really "gene" patents. Ask ten geneticists what a gene is, or more specifically how they would define a region of DNA that discretely bounds a "gene," and you are likely to get 11 different answers. What really matters for patenting purposes (that is, for legal and commercial purposes) are regions of the genome—specific sequences of nucleotide Cs, As, Gs and Ts—that *do* something. Even here, however, just what constitutes *doing* something can be a matter of contention. These debates revolve largely around determining what is sufficient to meet the formal US Patent and Trademark Office requirement that a patent application demonstrate the "utility" of a claimed invention. When it comes to DNA, assertions of utility have ranged widely and sometimes wildly; some going so far as to assert that utility should be defined as a function of market forces: if someone is willing to pay to license a product, then it must be useful.

Similarly, "race" is a very unstable and contested technology of classification, particularly when it enters the realm of biotechnology and biomedicine. It is incontestable that socially defined categories of race have played a profound role in shaping myriad disparate health outcomes in the US and around the world. But these categories change over time and across space. The US Census once had discreet categories for such racial groups as "quadroon," "mulatto," and "Hindu." Armenians were sometimes sent to segregated black schools in the Jim Crow South. Today, an African American who codes as "black" in the US might be deemed white in Haiti or

mixed (*pardo*) in Brazil. A change to one's race may only be a plane flight away. Yet there remains a persistent fascination with trying to find some "true" or "real" basis to race at the molecular level of DNA.

In *The Genealogy of a Gene: Patents, HIV/AIDS, and Race*, Myles W. Jackson deftly explores the intersections between gene patenting, race, and the progress of scientific discovery through the story of the CCR5 gene, or the sequence of DNA that codes for the CCR5 protein, which is of central importance to understanding the etiology of HIV/AIDS. The critical contribution of his book is to use this case study to provide a fine-grained analysis of the historical contingency of the developments that led to contemporary practices involving the intersection of gene patenting, race, and biomedicine. One of Jackson's prime concerns as a historian is to demonstrate for the reader how our current situation (as messy and confused as it is regarding matters of patents, race, and genes) did not follow inevitably from some logic inherent to the pursuit of science or its commercialization through law. Rather, in closely detailing both particular scientific practices and a train of legal precedents that unfolded over the past century, he identifies a number of twists and turns in the story of CCR5 where patent claims or the use of race could have turned out very differently.

Jackson rightly observes that not all business was uniformly aligned along the same pro-gene-patenting axis. He does a good job of exploring the diverse interests and attitudes toward gene-patenting within the biotechnology sector and allied actors in academic research institutions. His tracing of the development of relevant patent doctrine is particularly useful in giving lie to the idea that the current regime of gene patents was inevitable, or at least singularly logical.

Jackson makes similar arguments about the racialization of the CCR5 gene, exploring how researchers often framed the varying prevalence of the critical Δ32 mutation in distinct populations in racial or ethnic terms. He

provides the reader with a good sense of the complexity of arguments about the place of race in genetic research, noting that "to portray the debate as merely the constructivist (race is simply ideology) versus essentialist (race is genetic) is too simplistic to represent accurately the debate's complexity."

Nearly half the book, however, concentrates on issues related to patenting. Looking back at some of the fiercest arguments over gene patenting during the late 1990s and early 2000s, it is actually possible to reconfigure the debates as less about *whether* genes should be patentable than about *when*—that is, at what point in the stream of invention should they be patentable? Thus, for example, smaller biotech start-ups like Millennium or Incyte wanted to patent genes as far "upstream" as possible— typically at the point where any segment of DNA could be identified that might have any conceivable possible utility to future research. In contrast, big pharmaceutical companies, such as Merck or Pfizer, did not want DNA to be tied up too soon by patents because their business was based on selling therapeutic interventions that were developed much further downstream. Then you had diverse groups outside of industry who were opposed to gene patenting altogether.

Jackson nicely explores the development of the concepts of "purification" and "isolation" of genetic material that have played a central role in the development of patent doctrine regarding biological materials over the past century. He traces the origin of this term in US patent law in the foundational 1911 case of *Park-Davis & Co. v. H.K. Mulford Co.*, where Judge Learned Hand held that adrenaline extracted from animal tissue and subsequently purified and isolated for use as a medicine merited patent protection. This distinction was critical because products merely discovered in nature are not patentable. We see this latter principle in full force in the 1980 case of *Diamond v. Chakrabarty*, (where the US Supreme Court upheld a patent on a manufactured bacterial life form), which extended patent

protection to "include anything under the sun that is made by man."

In the concept of purification and isolation, however, there is an interesting elision of scientific and legal meaning and practice. I would argue that most scientists who are trying to identify significant portions of DNA do not think of their work in terms of "purification and isolation." In other words, this is a legal not a scientific concept. For the purposes of patent law, purification and isolation really means legally stripping a gene of any associations with the "natural" world because nature is where patents cannot go. In this process, the laboratory becomes a critical transitional space, not only for scientific discovery but for legal transformation. Thus, in the recent critically important case of *Association for Medical Pathology et al. v. Myriad Genetics et al.* the Supreme Court struck down patents on naturally occurring segments of DNA while

upholding patents on "complimentary" cDNA segments largely because the latter do not exist in "nature" but are solely the result of human intervention.

With the *Myriad* case, Jackson misses an opportunity to put a capstone, as it were, on his argument about the historical contingency of the developments he explores. Granted, the Supreme Court decision came down in June 2013, when this book was likely nearing completion. Yet, as Jackson himself tells us in the epilogue, he was intimately involved in the case—to the point of helping the ACLU craft an *amicus* brief to the Supreme Court. Jackson mentions the Supreme Court holding and briefly integrates it into his analysis but he does not give it the depth of meticulous analysis devoted to the development of prior legal doctrine in the arena of gene patents. Given the Court's split decision, partly upholding and partly striking the US District

Court's sweeping restrictions on gene patenting, this case provides perhaps the best example of how the development of legal doctrine in this area has not progressed along some inevitable trajectory toward patentability.

Finally, Jackson provides a cautionary note to the reader regarding the technical complexity of some of the discussions of molecular biology and supplies a useful glossary of technical terms at the back. A similar caution might also have been in order regarding discussions of aspects of patent law. In general, however, Jackson's writing is clear and relatively easy to follow on these matters, though a more direct statement at the outset in layman's terms of just what CCR5 is and why we should care about its relation to race and patenting would have provided a helpful frame for the general reader to more easily follow the ensuing discussion. □

THE CINEMA OF POETRY
BY P. ADAMS SITNEY

Oxford University Press
December 2014, 296 pages

A Review by
Bert Rebhandl

In 1983, at the film festival in Telluride, Colorado, organizers Bill and Stella Pence thought it might make sense to arrange for a meeting between Andrei Tarkovsky, visiting the United States to present his most recent film *Nostalghia*, and Stan Brakhage, the renowned experimental filmmaker, who, early on in his career, had taken up residency in a cabin in the woods outside of the city of Boulder. The encounter was asymmetrical in many ways: an exiled, narrative filmmaker from the Soviet Union visiting the territory of the other superpower—to which he felt no particular attraction—and an American master of the handmade

film, who often did not even take footage, preferring instead to paint on the film stock straight away. But there was one thing they had in common: both were deemed "poets" of the cinema.

The meeting went famously badly, as P. Adams Sitney notes in his new book, *The Cinema of Poetry*. Brakhage tried to show Tarkovsky his films, but they were met with hostility. The famous guest refused to sit and watch in silence, instead making no attempt to conceal his disapproval. "Sheer indulgence" was what he saw, according to Polish filmmaker Krzystof Zanussi, who took it upon himself to translate Tarkovsky's invectives.

The misunderstanding was all the more difficult to take for Brakhage, as he considered himself to be a poet in every sense of the word, albeit in the medium of film. Tarkovsky, for his part, insisted that poetry was untranslatable, effectively discarding Brakhage's notion that the two could share Russian poet Ossip Mandelstam as a common source of inspiration.

The question of translation goes beyond language, of course. It also concerns the translatability of the poetic experience into different media, which is, in fact, the unifying theme of Sitney's examinations of filmic works as different as those of Pier Paolo Pasolini, Dimitri Kirsanoff, Ingmar Bergman, Joseph Cornell, Lawrence Jordan, Nathaniel Dorsky, Jerome Hiler, and Gregory Markopoulos. They, in addition to Tarkovsky and Brakhage, are the subjects of *The Cinema of Poetry*, a work which can be understood both as an update and as a systematic extension to his tome *Visionary Film: The American Avant-Garde, 1943–1978*, the first edition of which appeared in 1979. In that canonical work, he outlined a movement of more or less loosely associated filmmakers, whose transitions between the fields of cinema, arts, and literature Sitney retraced from up close, being personally acquainted with many of the protagonists.

It is the rogue Italian theoretician and filmmaker Pier Paolo Pasolini who now provides Sitney with the central notion for his new book. Clinging to "the fiction that he was working within the domain of semiology," as Sitney pointedly writes, Pasolini devised a "*cinema di poesia*" as a written language of reality in cinematic images. Its main interest was to claim "poetry" for narrative cinema, though it also aimed to insert a class perspective, as the fervent leftist Pasolini was always looking for alternatives to a bourgeois point of view. His idea of "free indirect discourse" can be seen as a narrative device to heighten the sense of reality, and to frame it as a class struggle, which might serve to reconcile poetry with ideology. Sitney acknowledges in passing that Pasolini often puts "verbal pressure on the images," but he is willing to make the most of his critical insights, even if they never really add up to a coherent theory of poetry in cinema. But he finds, in Pasolini, a stepping stone to consider the two postwar European filmmakers who contributed most significantly to a concept of cinematic narration: Ingmar Bergman and Andrei Tarkovsky. In his close reading of *The Mirror*, Tarkovsky's autobiographical masterpiece, Sitney manages to extract a notion of "figurative expression" that transcends Pasolini's class interest and his denunciation of "poetic"

characters as neurotic representatives of the bourgeoisie. "In its commitment to the model of poetic observation, Tarkovsky's theoretical position occupies a position between the narrative poetry expounded by Pasolini and Stan Brakhage's polemic for a cinema of visionary poetry," Sitney writes.

This is the seminal point of the book. From here Sitney can return to *Visionary Film* and partly re-read his own classic, now through the specific filter of poetry, or what Pasolini would have called *poesia-poesia*, a cinema not in the mode of prose, but of lyrical expression. The detailed discussions of Pasolini's frequently revised attempts to find a "non-symbolic language" without having to give up on his ideas of emancipatory subjectivity are one of the strengths of this book. It helps that Sitney is not only an expert on experimental cinema, but also on Italian film history. He reads Pasolini in his original language, which does not always make things clearer—but his patience pays off, as it seems futile to try to rigidly conceptualize the associative thinking of Pasolini, which eventually found a brilliant label in a book title: *Empirismo eretico*, heretical empiricism.

The extensive second part of *The Cinema of Poetry* consists of readings of bodies of works from American avant-garde cinema: Joseph Cornell, who influenced a whole phase of

"lyrical film" within that avant-garde; Lawrence Jordan, who used cut-out animation for his vision of an autobiographical non-aligned temporality; Stan Brakhage, of course, who saw himself in the tradition of Ezra Pound and Gertrude Stein; and Gregory Markopoulos, who created a specific site for his films, a *Temenos* in Greece, to physically approach a hierophantic reality he drew from reading (about) Hölderlin and other heirs to the sublime origins of occidental culture. The notion of a "climate of poetry," as quoted in passing from French composer Olivier Messiaen, is the last word of the book. It implies a physical experience that is at the core of avant-garde sensibilities in cinema: "No ideas, but in things."

Stan Brakhage often used this dictum by the poet William Carlos Williams. It can also serve as a bridge between the two main parts of Sitney's book. It is not his intention to eliminate the differences between two fundamentally separate fields of cinema: narrative, figurative film and experimental film, which often has no protagonists in the orthodox sense. In looking for commonalities between these two fields, the often self-contradictory Pier Paolo Pasolini is an excellent guide—and P. Adams Sitney has taken his cue to make for a truly rewarding voyage through twentieth-century art. □

The *Berlin Journal* is pleased to be able to present in this issue images from *Anthony McCall: Notebooks and Conversations* (Lund Humphries, 2015), a new book by Graham Ellard and Stephen Johnstone. In an effort to document the creative process behind McCall's "solid light" installations, the book presents a decade of conversations with the artist in addition to facsimile reproductions of pages from his notebooks. McCall, who was

an American Academy fellow in fall 2014, first gained recognition in 1973 with his seminal work, *Line Describing a Cone*. Since then, his work has been exhibited in museums around the world, including the Museum of Modern Art, Tate, Whitney Museum of American Art, Centre Pompidou, and Hamburger Bahnhof in Berlin. McCall's work, though, is difficult to categorize, occupying, as it does, the intersection between sculpture, cinema, and

drawing. Writing in the 1970s, 2011 American Academy Fellow P. Adams Sitney wrote that *Line Describing a Cone* was "the most brilliant case of an observation on the essentially sculptural quality of every cinematic situation." Now, the new book provides a unique insight into McCall's creative process as well as his own understanding of the effect of his artwork on the viewer. □
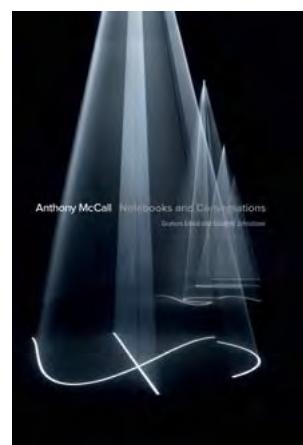
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POEMS

ONE GLASS NEGATIVE

We were ridiculous—me, with my high jinx and hat. Him, with his boredom and drink. I look back now and see buildings so thick that what I thought I was making then is nothing but interlocking angles and above them, that blot of gray sky I sometimes caught sight of. Underneath is the edge of what wasn't known then. When I would go. When I would come back. What I would be when. I was hard working but sometimes being becomes a habit: I came on stage wearing a lavender fitted dress with a stand-up collar. He looked at me, he took a drink. He was a man examining a hothouse flower. Over and over. I clicked, then closed my eyes—the better to imagine my upcoming absence.

SELF-PORTRAIT
AS A PHOTOGRAPH OF A PLATTER

A platter can embody a wish to be simple. We are who we are. *Wir sind*. I also speak English. I married a master. I taught him something. I know what I'm doing. An image stands for the thing that is taken. I am taking everything I see. This is how I see myself. The platter is flat and somewhat lasting. I made it last. Circum/ambient: to be around.

ME, A CHRONICLE

Shapes that begin as just one solution to a common problem can go on to become an inflexible method. Take for example houses. Once a certain way of arranging walls takes hold, it's difficult to imagine any other. Another example might be locomotion, the method and circular means of moving from one place to another. I was drawn early to the idea of other modes of seeing, especially to photography. Looking back, I see myself entering the living room. I see my difficult father, crisscrossing the room to close or open a window. My delicate musician mother, her zigzag pattern of static that moved from person to person. My sister, the new century's picture of a perfect child. My brother, an eventual man. At one point, the idea of rebellion became a unified belief. I left. Can you imagine the impact? Who hasn't felt that in order to breathe, she has to splinter the first self and leave it behind? I constructed a second self. I photographed myself as if I were a building.