



“You are a prime example of synchronized complexity. So, take yourself as a paradigm, and neither overestimate nor underestimate yourself.”

DIRK BAECKER

Academic Complexity: A Sketch of the Next University

Currently, the university is a place that invests in academic specialization. It rightly fears not having answers to the complexity of nature, culture, and society. The essay describes two necessary ingredients for a culture of academic complexity.

INTRODUCTION

The text “Academic Complexity: A Sketch of the Next University” focuses on the current and possible future state of the university. The university is in a state of crisis because nobody knows how to answer the complex problems of nature, culture, and society by means of specialized academic disciplines. Note that it is not the natural and social sciences that are in crisis. What we know about our world we know due to

these sciences. It is the university, understood as a body comprising faculty, students, and administrators, which focuses on academic disciplines and thus fails to account for two important types of real complexity. The utopia in the text lies in finding a way of ameliorating this current failure. The first of the two complexities has been known since the 1960s, when Herbert A. Simon described a science of design practiced

by professionals like therapists, architects, consultants, lawyers, and others who research a type of complexity they create while doing their research. They carry out a kind of constructivist research that comes into conflict with an objectivist methodology insisting that the object does not change in the process of research. Correspondingly, the first aspect of this utopia consists in describing the university as a place of transformative research. The second type of complexity, and the second aspect of the utopia, entails taking seriously a cognitive perspective on

the world that tells us that organisms, brains, consciousness, and communication all do their own kind of cognition. Here, complexity consists in the co-evolution of these mutually opaque systems. The university that this text conceptualizes is a place which nurtures the idea that any action, experience, communication, or, indeed, idea is the product of these systems aligning their operations and parting again. The university is the only place in society that nurtures the knowledge of the deep cognitive improbability of our knowledge.

KNOWLEDGE AND FEAR

The university is a place that has amassed an enormous amount of knowledge. In the natural, social, medical, and legal sciences, as well as in literary studies and the arts, there is nothing that has not been studied, although everything still remains to be known. And yet, the university is a place of fear. Bright students fear losing their time studying past knowledge that barely prepares them to address future questions. Experienced teachers fear having to focus on theories and methods that were successful in the past but that may be incapable of leading society out of its current lock-ins regarding the problems of globalization, digitization, and climate change. Administrators, who are still in love with an institution that they are trying to adapt to global change, fear that the university can only be changed by almost completely turning its back on its splendid past as a place of critical inquiry, skeptical thinking, and relentless objection.

FUNCTIONAL DIFFERENTIATION

The very principle that explains how the university managed to be one of the oldest and most resilient institutions—to be compared only to local authorities, armies, hospitals, and churches—nowadays seems to put it in jeopardy. That principle is the idea of functional differentiation. Since early modernity, *studium* has been distinguished from both *imperium* and *sacerdotium*¹. To seek and teach knowledge has never meant also aspiring to obtain power, nor has it entailed the belief that ministering was the only path to divine salvation. All three of the higher theological, juridical, and medical faculties became places of authority closely supervised by their governments, who wished to know what the Holy Scripture truly meant, how to apply the law, and how to administer medicine. Yet Immanuel Kant² was right to point to a lower faculty, the philosophical one, which could keep those higher faculties in check by never ceasing to seek truth or express concerns. Since the ancient Greeks, seeking truth has been a means to strip knowledge of everything that has the status of mere opinion.

Society needs such a medium in order to be able to integrate what people are able to experience in their world. Yet the costs of this have been high, because it involves abstracting from any need to act and building a theoretical and methodological apparatus that, while ensuring arguments are based on evidence, has also invited dogmatism by invalidating any knowledge that was surprising, puzzling, or just unfamiliar³. Functional differentiation has nevertheless worked well. One might even say that any attempt to insist on evidence and to obey the dogma of argument challenges students and scholars who, while studying and teaching, were members of their society and both enjoyed and wondered about anything not yet part of received knowledge that incited their curiosity.

The university of both ancient and modern society has been alphanumeric. It relies on texts and numbers, even though its background in Plato's Academy still feeds it with a deep fondness for the spoken word,

1 Stichweh, Rudolf. 1991. *Der frühmoderne Staat und die europäische Universität: Zur Interaktion von Politik und Erziehungssystem im Prozeß ihrer Ausdifferenzierung (16. bis 18. Jahrhundert)*. Frankfurt am Main: Suhrkamp Verlag.

2 Kant, Immanuel. (1798) 1992. *The Conflict of the Faculties*. Translated by Mary J. Gregor. Lincoln, NE: University of Nebraska Press.

3 Luhmann, Niklas. 2012. *Theory of Society, Volume 1*. Translated by Rhodes Barrett. Stanford, CA: Stanford University Press. p. 203–4.

spoken among kindred spirits facing each other and challenging each other to go beyond received wisdom to obtain new kinds of knowledge. The medieval tradition of the school developed an understanding of *artes liberales* that distinguished between knowledge regarding communication, i.e., the *trivium* of grammar, rhetorics, and dialectics, on one hand, and knowledge regarding the external world, i.e., the *quadrivium* of arithmetics, geometry, astronomy, and music, on the other. Ways to meet the demands of arguments (*logos*) were combined with ways to represent and administer the world according to numbers, space, movement, and time. The school tradition thus developed a “closed conception unlike anything we now have to offer”⁴. Texts, interfering not only with spoken words, but also with sensual perceptions, and numbers, accounting for unruly realities, have become the medium to construct and test a knowledge that aimed to uncover universal truths by always looking for errors, mistakes, and proven untruths.

Ancient and modern universities rule by maintaining a knowledge that works productively by cultivating uncertainty, incompleteness, and doubt. There is no university if its denizens do not learn to ask questions both critical and curious. It does so theoretically and methodologically. Its texts produce the recursive linearity of arguments and its numbers model unlikely causal relations. They open up the double horizons of an infinity of further questions and further answers by arguing about arguments and collecting further data to show alternative causal relations. This thereby boosts the autonomy of an institution that becomes academic due to its distance from the world, without ever stopping to produce a knowledge that—in matters technical, social, and cultural, in engineering, physics, chemistry, legal studies, medical sciences, pedagogical studies, and artistic studies—becomes a technology to change the world. To think about the university means thinking about the questions that produce knowledge, the ideas in search of proof, or the critical inquiry that lays the foundations for professional practices. There is a paradox inherent in that kind of procedure, but it is the unfolding of this paradox that constitutes the university. If you are looking for secure and certain knowledge, you have to go somewhere else.

⁴ Luhmann, Niklas. 2013. *Theory of Society, Volume 2*. Translated by Rhodes Barrett. Stanford, CA: Stanford University Press. p. 221.

THE SCIENCE OF DESIGN

Nevertheless, something has gone wrong. The university never quite knew how to decide between being a place of science or being a place of education. Somehow, the first of these two places needed to question what the second had to teach. You cannot only teach by questioning. Any quest for truth requires the acquisition of knowledge before being able to move beyond it. The tension between these two places existing in just one institution turns the university into a lively place, where students struggle with teachers, schools with departments, and administrators with everybody. Yet, somehow, the conflicts could only be maintained and regulated by keeping a third, or indeed a fourth, party out. That fourth party—if we consider research, teaching, and administration the first three⁵—includes anybody who embarks on a professional career path after having been academically educated. When we talk of a “third mission” of the university—the mission of consulting and even transforming fields of professional activities in society—we need to take into account that this fourth party, scientifically educated professionals, have been active in society all along. The “mode 2” of knowledge production, which is not just disciplinary but transdisciplinary and contextual⁶, is one that does not have to be invented but is already common practice in many fields where people of different professions meet to solve unfamiliar problems.

Think of architects, designers, lawyers, consultants, therapists, physicians, or teachers. All of them engage with the complexity of the phenomena they hopefully learned about when at university. Yet, after suffering a reality shock of greater or lesser severity, they quickly learn that most of the knowledge they brought with them from the university has to be forgotten or at least safely stored away in order to be able to deal with the practical challenges of their jobs. Most of them learn that the truths of the academy, the methods of research, and the scope of the theories they bring with them cannot offer them an understanding of the situation they are in, let alone guide them to possible solutions to the problems they face. They learn that texts are oversimplified, that numbers are heroic abstractions from messy processes, and that any combination of text and numbers does

5 Baecker, Dirk. 2010. “A Systems Primer on Universities.” *Soziale Systeme* 16, no. 2: 356–67.

6 Gibbons, Michael, Camille Limoges, Helga Nowotny, and Simon Schwartzman. 2010. *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. 2nd ed. London: Sage.

not give even the faintest idea of the procedures they are meant to be able to manage.

Yet, they cope. They manage to unlearn, learn, and relearn. Some of them even discover that there are secret links between academic knowledge and practical questions, concerning “tricks of the trade”⁷ that are useful in a search for truth as well as in the management of a project involving different people, different interests, and different competencies. Distinctions such as means from ends, solutions from problems, intentions from consequences, cause from effect, talk from action, or even things under human influence from things beyond our influence help a lot to organize experiences that sadly do not obey academic definitions of domains. Suddenly, some of those practitioners may find themselves wanting to return to studies of the theory of science, epistemology, or philosophy of logic (including *tertium datur*) because they realize that scientific procedure and even scientific creativity when dealing with evidence and argument may help a lot to survive situations that arise in practice.

Yet, they almost never come back. Or they come back for some alumni party and become sentimental when they see that their former professors still believe in the dubious truth of texts, models, and numbers. Actually, as Herbert A. Simon was among the first to indicate⁸, they become victims of universities which are not able to account for problems that are created at the same time as they are researched. In order to both differentiate and integrate research and teaching, universities have opted to believe a natural science methodological fantasy that maintains that the object of research holds still for as long as you are studying it. Truth is only possible if you stick to almost passive experience, excluding any deliberate action which might bring the object forth in the first place. Teaching, so to speak, is only possible if the object is placed before you and nobody has any influence on it. Anything else would be training, such as is familiar in craft businesses and also in laboratories once the student crosses the line to become a doctoral student.

The consequence is that the complexity of the practical world, which is dealt with by the professions taught at universities, never finds its way back into universities. A methodology that would take account of objects that

7 Becker, Howard S. 1998. *Tricks of the Trade: How to Think about Your Research While You're Doing It*. Chicago, IL: University of Chicago Press.

8 Simon, Herbert A. 1981. “The Science of Design – Creating the Artificial.” In *The Sciences of the Artificial*, 2nd ed., 192–229. Cambridge, MA: MIT Press.

one can only study and try to understand while participating in bringing it forth—by attending a court case, designing a house, curing a patient, consulting an organization, or standing in a classroom—is thus beyond the academic horizon. Simon proposes a science of design in order to show that, what complexity studies in professional practices lack in objectivity, they make up for by developing a methodology of optimality. As soon as one defines an optimum of a possible solution, satisfying at whatever level it may be, you get an “external” criterion that allows you to “objectively” share experiences and judgments among all involved.

THE NEXT UNIVERSITY

The Next University of the “next society”⁹, that is of a telematic society that goes beyond alphanumeric codes—by integrating electronic media, digital apparatus, algorithms, and possibly even some kind of artificial intelligence into societal communication^{10 11}—will have to look again at its functional differentiation in terms of a science of design that enables it to engage in real-world projects without foregoing its academic autonomy and dignity. The debate on a “transformative science”^{12 13 14 15} should be taken seriously in its search for a science that retains its academic credentials of critical inquiry, skeptical thinking, and relentless objection while at the same time overcoming its fear of being overwhelmed by a type of complexity it is not used to.

9 Drucker, Peter F. 2001. “The next Society: A Survey of the Near Future” *The Economist*, November 3, 2001.

10 Flusser, Vilém. 1997. *Medienkultur*. Edited by Stefan Bollmann. Frankfurt am Main: Fischer Taschenbuch.

11 Baecker, Dirk. 2018. *4.0 oder Die Lücke die der Rechner lösst*. Leipzig: Merve.

12 Schneidewind, Uwe, and Mandy Singer-Brodowski. 2014. *Transformative Wissenschaft: Klimawandel im deutschen Wissenschafts- und Hochschulsystem*. Marburg: Metropolis.

13 Strohschneider, Peter. 2014. “Zur Politik der Transformativen Wissenschaft.” In *Die Verfassung des Politischen*, edited by André Brodocz et al., 175–92. Wiesbaden: Springer.

14 Schneidewind, Uwe. 2016. “Die ‘Third Mission’ zur ‘First Mission’ machen?” *die hochschule: journal für wissenschaft und bildung* 25, no. 1: 14–22.

15 Schneidewind, Uwe. 2018. *Die Große Transformation: Eine Einführung in die Kunst gesellschaftlichen Wandels*. Frankfurt am Main: Fischer Taschenbuch.

In fact, neither climate change nor globalization and migration or digitalization and datafication are the problems to look at when it comes to new calls for the university to bring its knowledge to bear on societal challenges. The true problem to look at is complexity. Complexity, as is well known¹⁶, is a feature defining phenomena that are neither small enough to be studied in terms of cause and effect nor homogeneous enough to be studied statistically. They challenge venerable scientific methodologies by solving their problem of “organized complexity” without any scientist knowing how they do this. “Self-organization” has been the term invented to talk about a “knowledge” that complex phenomena—like living cells, brains, societies, organizations, or families—have about themselves without anybody outside them gaining access to this knowledge. Weaver called for interdisciplinary teams or “the computer” to begin dealing with questions, not of understanding complex phenomena—which may well be beyond human ability—but of dealing with them by means of experiments, with them testing inputs and watching outputs. Thus they would constitute a history of interaction which has a memory of its own and enables the observer—and the complex phenomenon—to learn.¹⁷

Meanwhile, complexity studies have further developed^{18 19 20} without realizing that a phenomenon that challenges the observer is not better understood if the observer just doubles and triples their efforts. The hope to find simple mechanisms producing chaotic surfaces, thus mimicking complexity, may well be pursued somewhat further. But what should be more interesting, or so it seems to me, is a combination of cognitive and cultural sciences that studies the autonomy of complex phenomena—or “black boxes”—within a kind of “global contextualism.” Global contextualism

16 Weaver, Warren. 1948. “Science and Complexity.” *American Scientist* 36, no. 4: 536–44.

17 Ashby, W. Ross. 1958. “Requisite Variety and Its Implications for the Control of Complex Systems.” *Cybernetica* 1, 2: 83–99.

18 Waldrop, M. Mitchell. 1992. *Complexity: The Emerging Science at the Edge of Order and Chaos*. New York, NY: Simon & Schuster.

19 Mitchell, Melanie. 2011. *Complexity: A Guided Tour*. Oxford: Oxford University Press.

20 Thurner, Stefan, Rudolf Hanel, and Peter Klimek. 2018. *Introduction to the Theory of Complex Systems*. Oxford: Oxford University Press.

has been proposed by Yehuda Elkana and Hannes Klöpper²¹ as a guiding idea for the twenty-first-century university, replacing the older idea of local universalism. Local universalism was humanism's and the Enlightenment's idea to conceive of a rational world society based on nothing more than historically contingent European experiences. Global contextualism is the idea of taking nothing seriously, except for highly idiosyncratic—or “singular”—phenomena that depend on and sometimes produce their equally particular context. This concept fits rather well with another idea received within cognitive sciences^{22 23} that describes complex phenomena as autonomous within their highly specific environment. Ever since, the concept of complexity has invited us to look at systems behaving within an environment that is as supportive as it is alien to the system. Complexity means incommensurability between system and environment.

The interesting idea in complexity research, cognitive studies, and cultural studies is the idea of autonomy in interaction. Combine this with the concept of homeostasis^{24 25}—which describes complex adaptive systems as being able to adapt externally as long as they are able to maintain their inner equilibria, that is, to adapt to themselves—and you get a potentially fruitful idea of how to build the Next University. To cut a long story short, the Next University should invest in its own complexity to intervene into practical situations of all kinds, be they natural or artificial, political or economic, local or global, long term or short term, multiplayer or single player, as long as (a) those situations can be conceived of as involving autonomous complex entities on their own and (b) the intervention follows all rules of an interaction, that is, it exposes the university and its interests as much as any other participant.

How do you invest in your own complexity? The next society that the Next University is trying to come to terms with provides an answer to this

21 Elkana, Yehuda, and Hannes Klöpper. 2016. *The University in the Twenty-first Century: Teaching the New Enlightenment in the Digital Age*. Edited by Marvin Lazerson. Budapest: Central European University Press.

22 Maturana, Humberto R., and Francisco J. Varela. 1998. *The Tree of Knowledge: The Biological Roots of Human Understanding*. Rev. and Ed. New York, NY: Shambhala.

23 Varela, Francisco J. 1999. *Ethical Know-How: Action, Wisdom, and Cognition*. Stanford, CA: Stanford University Press.

24 Cannon, Walter B. 1929. “Organization for Physiological Homeostasis.” *Physiological Reviews* 9, no. 3: 399–431.

25 Cannon, Walter B. 1963. *Wisdom Of The Body*. Rev. and Enl. Ed. New York, NY: Norton.

question. Organizations dealing with value chains organized as networks become agile, which means that they work only at the behest of some external unit—a client within or without the organization—and restrict all their internal workings to prepare for such orders, including, of course, ways to advertise their capabilities and to convince possible clients of possible orders. There is no need to think a university beyond agile methods of management²⁶.

In addition to Bruno Latour and Peter Weibel's many forms of "making things public"²⁷, Peter Schneidewind's *Reallabore* (laboratories of reality)²⁸, and Patrizia Nanz and Claus Leggewie's *Zukunftsräte* (future councils)²⁹ there should be and will be a plethora of formats to bring together different societal actors, universities among them, to do research into situations of complexity, teach methodologies and theories to deal with them interactively, and consult with respect to a possible understanding of what to know and what to do. Universities have special competencies regarding theories and methodologies, yet they should be aware that practitioners have their own practical theories and practical methodologies as well and that any of these theories and methodologies, including the university's own, contains biases that can be accounted for only in concert by all participants.

A MINIMAL COMPLEXITY

Let me stick with the term future council and describe formally the complexity it involves. Any situation whatsoever involves at least five system references, all of them describing autonomous units counting from one to an indefinite number³⁰. I speak of five system references,

26 Baecker, Dirk. 2017. "Agilität in der Hochschule." *die hochschule: journal für wissenschaft und bildung* 26, no. 1: 19–28.

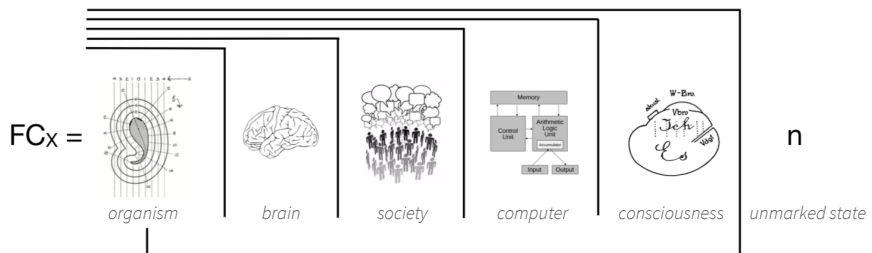
27 Latour, Bruno, and Peter Weibel, eds. 2005. *Making Things Public: Atmospheres of Democracy*. Cambridge, MA: MIT Press.

28 Schneidewind, Uwe. 2018. *Die Große Transformation: Eine Einführung in die Kunst gesellschaftlichen Wandels*. Frankfurt am Main: Fischer Taschenbuch. p. 442–447.

29 Nanz, Patricia, and Claus Leggewie. 2018. *Die Konsultative – Mehr Demokratie durch Bürgerbeteiligung*. Berlin: Wagenbach. p. 58.

30 Baecker, Dirk. 2019. *Intelligenz, künstlich und komplex*. Leipzig: Merve.

because, in fact, the biology of the organism, the neurophysiology of the brain, the philosophy and psychology of consciousness, the sociology of communication, and computer science are the fields where cognitive studies of operationally closed systems are most advanced. Those five system references are synchronized one way or the other, be it by consent or conflict, be it hierarchically or heterarchically, be it temporarily or for some longer duration. They synchronize within a “form” that includes, by exclusion, anything, n , that they may disregard in their interest and at their peril and thus constitute the “form” of a future council, FC , dealing with an issue X , FC_X :



Such a form, using Spencer-Brown’s³¹ notation of his calculus of indications, models, as I understand it, an eigenvalue of a nonlinear recursive function, which means that there will be a chaotic surface of any future council that is finding its way to deal with a certain issue. Yet beneath that chaos, or, more accurately, attracted and organized by that chaos, there will be those five system references, describing what dynamics are to be expected among all participants.

I call this form a “catject,” since it is neither a subject exerting nothing but its free will nor an object that stands still while being dealt with; instead it is a recursive function of communication, searching, defining, negotiating, and changing the terms approved by bodies, brains, social settings,

31 Spencer-Brown, George. (1969) 2008. *Laws of Form – Gesetze der Form*. Translated by Thomas Wolf. 5th ed. Lübeck: Bohmeier Verlag.

computing devices, and consciousnesses^{32 33}. It is evident that universities' main output consists in knowledge that emphasizes the distinction of those five system references, adding further ones if needs be, searching into their specific dynamics, describing their ways of synchronizing, and moderating their mutual accommodation. After more than 2000 years of its existence in a great variety of forms, the university shall once again come of age by becoming society's cognitive place to do cognitive sciences.

CONCLUSION

Talcott Parsons and Gerald M. Platt³⁴ conceived of the university as society's "intelligence bank." Students withdraw from the university a capacity to increase their ability to deal with complex situations and deposit their current intelligence with the university as assets, which the university uses to teach curricula and give lectures and seminars. And scholars and lecturers draw on the university to pursue their research interests such that their methodological and theoretical abilities to teach and research increase instead of diminishing; simultaneously, they spend their time at the university and deposit their current knowledge and ability to raise problems and ask illuminating questions to make educational use of scientific knowledge. Both withdrawals and deposits rely on a reasonably nontrivial calculus of people met, times spent, and matters experienced. Any single meeting, project, and issue must be dealt with in light of concerns to not lose but increase individual and social intelligence capital. The fear I mentioned when beginning this essay is related to this calculus. It is a fear reflecting the changed relationship between university and society.

32 Baecker, Dirk. 2007. "The Network Synthesis of Social Action I: Towards a Sociological Theory of Next Society." *Cybernetics And Human Knowing* 14, no. 4: 9–42.

33 Baecker, Dirk. 2008. "The Network Synthesis of Social Action II: Understanding Catjects." *Cybernetics And Human Knowing* 15, no. 1: 45–65.

34 Parsons, Talcott, and Gerald M. Platt. 1973. *The American University*. Cambridge, MA: Harvard University Press.

If “intelligence” is the ability to make “appropriate selections”³⁵ when dealing with practical, methodological, and theoretical questions—if it is the ability to come up with search trees to conduct meaningful heuristic search strategies³⁶, and if it is, moreover, homeostatic in the sense of maintaining internal equilibria while dealing with external challenges³⁷—then, the university, understood as an intelligence bank, is constantly under pressure to prove the appropriateness of its research questions with respect to both societal challenges and the cultivation and upgrading of its internal resources, in terms not only of theories maintained and methods applied but also of formats developed and used to do its research, teaching, administration, and supervision.

The conflict described by Kant between authoritative faculties on one side and critical faculties on the other seems to have been an important means of providing the university with pervasive-enough internal problems to ensure a minimal autonomy with respect to both *sacerdotium* and *imperium*. What will replace this conflict in the Next University?³⁸ What kind of inner conflict will ensure that the minimal self-reference of the university, which is why it has been able to avoid getting lost in the language games, relevance structures, and problem priorities of its societal environments, remains? My tentative answer to this question pertains to the understanding of the university as a cognitive place in terms of an intelligence bank. Any social situation is also an ecological site. It combines organically, neurally, mentally, technically, socially, and culturally specified cognitive abilities in different forms, hierarchical structures, and heterarchical dynamics. *The sacerdotium* and *imperium* of yore are nowadays forms of synchronization between our four or more system references, which are only minimally at the disposal of the respective social situation. In order to differentiate and reproduce, social situations exert a certain kind of domination to make sure that incommensurable system references, standing orthogonally in

35 Ashby, W. Ross 1981. “What Is an Intelligent Machine?” In *Mechanisms of Intelligence: W. Ross Ashby’s Writing on Cybernetics*, edited by Roger Conant, 295–306. Seaside, CA: Intersystems.

36 Newell, Allen, and Herbert A. Simon. 1976. “Computer Science as Empirical Inquiry: Symbols and Search.” *Communications of the ACM* 19, no. 3: 113–126.

37 Cannon, Walter B. 1929. “Organization for Physiological Homeostasis.” *Physiological Reviews* 9, no. 3: 399–431.

38 I owe this question to Timothée Ingen-Housz.

relation to each other, keep a certain shape or produce certain surfaces so that any one of them can integrate with all others.

The university is the place where any form, hierarchy, and heterarchy can and may be considered anew. It certainly has its own shape to be maintained in order to be able to differ and reproduce. But this shape consists in its very ability to problematize it and to constantly look at its own formats in terms of intelligence lost or gained. The university provides society with an ability to make variable any specific synchrony of system references and domination of one or a few of them by all others. The university understands cognition among organisms, brains, society, computers, and consciousness as the medium all social forms have to comply with to gain their specific form and, therefore, as the medium which has to be respected for the “loose coupling”³⁹ of its elements as the evolutionarily necessary variety pool of society. To be sure, there are many rigidities—not least dogmatic, epistemological, and bureaucratic ones—in the university as well, with some student movements insisting on their abolition, and others, if societal uncertainties get too demanding, insisting on their enforcement.

A “university in ruins”⁴⁰ is a university that has lost its variable capacity to search for new and other forms of synchrony. And if the university is to be “unconditional”⁴¹ at all, it is unconditional in its respect for cognitive studies, which do not accept any prevalence whatsoever of life, nature, technology, society or consciousness having the last word among all others. Sure enough, any scientific discipline has its own bias, which has also been called “problem statement” (*Problemstellung*)⁴². But this problem statement, be it economics’ idea of rationality, sociology’s idea of social order, philosophy’s idea of the problem of problems, psychology’s idea of motivation, or whatever, within the university is nothing but a statement to be criticized by any other discipline such that it never loses its tradeability. This is why a university necessarily has more than just one faculty. Its faculties no longer have to be distinguished as “higher” and “lower” as in

39 Heider, Fritz. 1959. “Thing and Medium.” *Psychological Issues* 1, no. 3: 1–34.

40 Readings, Bill. 1996. *The University in Ruins*. Cambridge, MA: Harvard University Press.

41 Derrida, Jacques. 2002. “The University Without Condition.” In *Without Alibi*, edited and translated by Peggy Kamuf, 202–237. Stanford, CA: Stanford University Press.

42 Weber, Max. 1949. *The Methodology Of The Social Sciences*. Translated by Edward A. Shils and Henry A. Finch. New York, NY: Free Press.

Kant's time. It is enough to have them distinguished at all, be it horizontally or laterally. And this is, moreover, why any university does not just need philosophy, to state the problem of the problem, but even more so the arts, because the arts are even more flexible in their capacity to combine, analyze, and recombine system references by organizing the perceptions of senses, semantics, formats, and structures. Yet the arts analyze and recombine without knowing quite what they are doing, just being challenged, as it were, by their ways of observing the rigidities and deadlocks of societal, mental, technical, and habitual routines, conventions, and traditions. It is necessary for cognitive sciences informed by classical disciplines to slowly give way to trans-disciplinary theories and methods and trans-classic logics to understand, describe, reflect on, and thereby make available the distributed medium of cognition beneath its variable forms.

One may distinguish between the societal function of the university and its various contributions to societal tasks⁴³. If its function consists in maintaining its cognitive variability with respect to all cognitive forms chosen by societal institutions, by situations, and by the university itself, its task nevertheless consists in responding to requests society may deem pressing. There is no danger of the university losing its autonomy as long as it chooses which requests to respond to, documents its research for anybody to inspect, and maintains a repository of knowledge that anybody may consult. The intelligence of the Next University may be seen in further developing its understanding of different types of cognition. If those types become black boxes when looked at in detail, so be it. It is their interaction that is at issue for both research and teaching in any case. Their status as a black box is a manifestation of their necessarily latent ability to transform their mediality.

Modern societies and their universities have been places where a hope has somehow prevailed that reason can have the upper hand in whatever system reference, taming bodies, tapping into brains, coming up with societal orders, developing helpful technologies, and not least sublimating any remaining resistance exercised by these systems by cultural gratifications given to them. No longer shall this be the case. The Next University will have to appreciate any one of those system references with respect to their own evolutionary sensibility and potential. Complexity

⁴³ Luhmann, Niklas. 1980. "Gesellschaftliche Strukturen und semantische Tradition." In *Gesellschaftsstruktur und Semantik: Studien zur Wissenssoziologie der modernen Gesellschaft*, Band 1, 9–71. Frankfurt am Main: Suhrkamp. p. 30.

shall replace reason as its guiding idea. The rest of society may be grateful if that complexity is and remains an academic one, such that it gets asked for and becomes useful only piece by piece. The Next University will have to moderate its perspective on cognitive variability. But for this, it needs to develop and acknowledge that perspective in the first place.

The fear that students, scholars, and administrators are currently experiencing may relate to the transformation the university has to undergo from the modern to the Next University. This transformation is nontrivial since it will affect the very institution meant to manage it. Both the picture of the “modern,” where it has come from, and the “next” it is trying to reach are changing in the process of transformation. There seems to be only one remedy to deal with that fear: We have to begin with the students, teachers, and administrators responsible for the process of transformation, who are experiencing what it means to look at the complexity of all system references and know that any issue to get knowledge about is a correlate of systems references synchronizing in various ways. Going back and forth between disciplinary, interdisciplinary, transdisciplinary, and aesthetic-artistic references to the issues being studied means gaining a feeling for the possible variability of forms and the reliability and resilience of the medium underlying them.

This undoubtedly leads back to Kant. In doing science there are three unconditionalities involved⁴⁴: first, a *subject* doing any categorical synthesis at all, second, a *hypothetical synthesis* about some members of a series, and, third, a *disjunctive synthesis* of members belonging to some system. The second condition may be fulfilled by coming up with some rhapsodic knowledge, yet only the third one, leading to the architecture of an argument, is worthy of being called scientific. But if you do not start by accepting the first condition—namely of you being the one to ask a question, draw a distinction, and accept and further develop knowledge—you may as well not start doing science in the first place.

The fear, therefore, is a fear of having to look at yourself. The utopian element in any university, including the next one, is to enable you to do so as a way to start engaging with some knowledge about, and within, the world. You are a prime example of synchronized complexity. So, take yourself as a paradigm, and neither overestimate nor underestimate yourself.

⁴⁴ Kant, Immanuel. (1781/87) 2003. *Critique of Pure Reason*. Translated by J. M. D. Meiklejohn. Mineola, New York: Dover. p. 378–9.

DIRK BAECKER

UNIVERSITY OF WITTEN/HERDECKE

Dirk Baecker is professor of cultural theory and management at the University of Witten/Herdecke. His research interests include sociological theory, cultural theory, economic sociology, organizational research, and management education. In his current research

project, the “Catjects Project,” Dirk Baecker explores catjects—the categories underlying the differentiation and reproduction of specific types of communication—as a method of cultural analysis.