Relations Between Knowledge and Power: An Overview of Research Questions and Concepts

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No Power Without Knowledge, No Knowledge Without Power[1]

Since the dawn of civilization, rulers have been convinced that they need forecasts to help them come to grips with the uncertainties of the future and that they need a lead in knowledge[2] and forethought[3] to acquire and exercise power. Depending on the culture and historical period, political and military rulers preparing to make a vital decision have first consulted oracles, dream interpreters, astrologers, augurs,[4] haruspices,[5] priests, shamans, prophets, and other "sages" contending that they have prophetic abilities, contact with the gods or ancestors, or uncommonly great knowledge (see Barton, 1994; Mann, 1986; Maul, 1994, 2003, 2013; and Chap. 5 by Maul in this volume).

Many rulers have endeavored to consolidate or widen their power and their epistemological advantage by setting up centers of knowledge (e.g., academies and universities) or monopolizing divinatory expertise, that is, the "knowledge and techniques of looking into the future" (see Chap. 5 by Maul in this volume). Persian

[1] I borrow this phrase from Kammler (2008, p. 305). It means that the exercise of power uses and generates knowledge and, conversely, that knowledge coincides with certain effects of power.

[2] This chapter's general references to knowledge are solely to categories and agents of knowledge that are capable of enhancing or jeopardizing power. Of course, there are categories of knowledge that have little or nothing to do with power. The Aristotelian concepts of *episteme*, *techne*, and *doxa* also apply in this context, but their highly dissimilar use by various authors today (see Löbl, 1997, 2003) could lead to misunderstandings.

[3] According to Russell (1958), civilization is "a manner of life due to the combination of knowledge and forethought" (p. 159).

[4] Augurs were concerned with interpreting the movements and cries of birds (Barton, 1994, p. 33).

[5] The haruspices interpreted omens and the entrails of sacrificial animals (Barton, 1994, p. 34).

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King Cambyses II (558–522 B.C.) had wise men and priests brought to Babylon from Egypt, Chaldea, Assyria, Persia, Judea, Syria, Asia Minor, and other lands he had conquered (see Brunés, 1967, p. 237), probably with the idea of concentrating all available knowledge in his power center. Caliph Harun al-Raschid (A.D. 786–809) and his son al-Ma'mun established the "House of Knowledge" at their seat of government in Baghdad, where Greek, Indian, and Persian tracts were translated into Arabic (Ahmed, 1988, p. 333). In past centuries several universities were founded by European sovereigns in their respective cities of residence, primarily to further their ambitions in the power politics of their day. The highly educated, scientifically minded, and multilingual Frederick II (1194–1250)[6] was supposedly the first European sovereign to pursue his own policy on science and knowledge generation independently of the church. In 1224 he founded a university of administration, the University of Naples, to secure his claim to power and to centralize and stabilize his government (Kintzinger, 2003, pp. 116–119).

> [Frederick II] surrounded himself with outstanding scholars, took part in their scientific endeavors, had them engage in debates at his court, and supported them however he could without restricting their work. In addition to theoretical learnedness, Frederick was also always concerned with its practical application. He regulated the vocational training of physicians and introduced scientific examinations and prescribed curricula. He wanted all the sciences to be taught at the University of Naples. The main objective, though, was to train lawyers for the kingdom's government and administration. This promotion of the sciences by a medieval prince was unique in its way, but it, too, had its shortcomings. Interested Sicilian subjects were forbidden to study abroad, and the knowledge gained in Naples was not allowed to be used elsewhere. (pp. 116–117)[7]

Because knowledge is "a part and an instrument of legitimate authority (*Herrschaft*) and social order" (Kintzinger, 2003, p. 33) and power "is a basic principle of modern society's development and integration" (Kneer, 2012, p. 267), the powers that be must continually try to attract exceptional exponents of knowledge to their goals, to incorporate those persons into consensual networks, and to prevent the formation of rival coalitions that could threaten their hold on power (see Popitz, 1992, pp. 201–211). A power center whose goals fail to win sufficient backing from scientists, engineers, intellectuals, journalists, artists, and experts from various other domains will eventually lose out to other aspiring power centers. Power is not stable; it must be attained, consolidated, exhibited, and legitimated again and again.[8]

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[6] Frederick II became King of Sicily (1198), King of the Germans (1211–1212), and Holy Roman Emperor (1220–1250).

[7] Unless otherwise specified, the English translations of quotations in this chapter are my own in collaboration with D. Antal.

[8] To Max Weber legitimate authority was institutionalized power (see also Popitz, 1992, p. 232) and was the indispensable sociological category as opposed to power because it was, as he stated, objectively and verifiably linked to effects rooted in order (Maurer, 2012, p. 361). Many authors use the terms *power* and *authority* synonymously. Others discriminate between them: "Whereas power is thought of as something mobile, dynamic, and malleable, authority [Foucault] is conceived of as something stable, irreversible, rigid. . . . In relations involving authority the mobility and dynamics observable in power relations are thus more or less completely expunged. Authority is thereby *reified*, *rigidified* power" (Kneer, 2012, p. 279).

But scholars were not called to the courts of kings, dukes, and princes only to advise them on their decisions, advocate their hegemonic interests, and thereby guarantee the viability and self-preservation of the given political system. Their presence in the centers of power or "centers of calculation" (Latour, 1987, pp. 215–257) also served to legitimate the decisions of rulers, reinforce the status of those in power, and meet their need for economic, political, and ideological appearances (see also Göhler, 1997; Kintzinger, 2003, p. 33).

With Kintzinger (2003) in mind, one can thus say that the power of authority has always tended to take advantage of the power of knowledge (p. 191). The only things to have changed over the centuries are the kind of knowledge that those in power demand and the relations between knowledge and power. After the rise of the natural sciences in the sixteenth century (see Taylor, Hoyler, & Evans, 2010), the importance of knowledge for political power became ever more apparent. Realizing its significance, Humanists such as Philip Melanchthon (1497–1560) saw the founding of schools and universities as a path to political power and economic wealth (see Meusburger, 2013, p. 22). As Francis Bacon (1561–1626) wrote a few decades after Melanchthon, "The roads to human power and to human knowledge lie close together and are nearly the same" (Bacon, 1620/1863, Aphorisms, IV [Book 2]). And "human knowledge and human power meet in one" (Aphorisms, III [Book 1]; see also Röttgers, 1980, p. 595). Not entirely agreeing with Bacon's idea that knowledge is power, Gottfried W. Leibniz (1646–1716) countered by stating, "Although each science extends power over external things, it has another use, namely, the culmination of the spirit"[9] (quoted in Meier-Oeser, 2004, p. 909). Other authors, too, stress that knowledge is "a good in itself, or a means of creating a broad and humane outlook on life in general [and not] merely an ingredient in technical skill" (Russell, 1958, p. 35).

But Leibniz and Russell seem to have overlooked that the knowledge central to power is not only about technical superiority, military prowess, and natural sciences but also about cultural knowledge, cultivation of the whole person (*Bildung*), a certain mindset, and moral position. Hence, if key decision-makers in a social system arrive at a refinement or culmination of the spirit (*Vervollkommnung des Geistes*), then this achievement can contribute to reducing the errors and misconceptions in their situational analyses, problem-solving, and decision making. It can raise the likelihood that these decision-makers will recognize the long-term unintended consequences of their actions or help them recognize those impacts earlier than would otherwise be the case. It can also mean that their erudition, ethics, and mindset may bring them to desist from certain actions that uneducated or ideologically fixated people in power would blithely execute (see also Russell, 1958, p. 41). The decoupling of science, cultivation of the whole person, and morality in the wake of modern science's development has triggered multiple crises and disasters (see Mittelstraß, 1982, pp. 103–107). Environmental catastrophes and armed conflict show what can ensue when technical knowledge is used without moral grounding.

[9] *Quanquam . . . omnis scientia potentiam in externa quoque augeat . . . , est tamen alius ejus usus . . . , ipsa scilicet perfectio mentis.*

Granted, scientific insights and innovative engineering have honed the efficiency of transport, industrial production, surveying, communications, surveillance technology, and military armament. In the nineteenth century, science became "a weapon in constellations of competition" (Schimank, 1992, p. 218). It is also true that new technical knowledge has assisted in perfecting the long-term exercise of power in many areas (Popitz, 1992, pp. 179–180). Decision-makers should nevertheless resist the temptation to distinguish useful (utilitarian) knowledge (usually meaning that of the natural sciences) from unuseful (nonutilitarian) knowledge. The assessment of whether or not particular knowledge is useful can change very quickly. If important political, economic, or military decision-makers lack wisdom, education, knowledge about foreign cultures, empathy, and experienced-based intuition, then their system will ultimately profit little from technological superiority.

In the nineteenth century, politicians or institutions holding political power came by two additional instruments to influence the generation and diffusion of knowledge. One was the introduction of compulsory schooling, which shifted the control of formal education from the church to the state and turned the system of state education into a kind of "disciplinary apparatus" in the sense meant by Foucault (1979, 2007; see also Speth, 1997). The second source of influence on the production and dissemination of knowledge was the process of nation-building, which was advanced by the spread of literacy and mass media; the construction of museums, monuments, and other places of memory; and national rituals and "heroic" historiography. Newly emerging nation-states aspired not only to political, administrative, and military sovereignty over a certain territory but also to a homogeneity of culture, memory, and identity. By controlling educational systems and cultural institutions (e.g., museums, memorials, national exhibitions, and media), the state or other power elites managed to manufacture national consent, shape firm convictions and interpretations of the world, promote an official language, and construct an ideological hegemony or domination over other ethnic, religious, or societal groups (see Gramsci, 1971; Gregory, 1998; Herman & Chomsky, 1988; Meusburger, 2011; Meusburger, Heffernan, & Wunder, 2011; Simonds, 1989; Tanner, 1999). "Hegemony, in Gramsci's writings, refers to non-violent forms of control exercised through the whole range of dominant cultural institutions and social practices, from schooling, museums, and political parties to religious practice, architectural forms, and the mass media" (Mitchell, 1990, p. 553).

In the course of history, the essence of domination, the ways in which power has been exercised, the forms in which it has been asserted and stabilized, and thus also the relations between knowledge and power have repeatedly changed, of course (see Imbusch, 2012a; Mann, 1986; Popitz, 1992).

> The early modern period marked the first time that the ruler's power was restricted by a contract between the sovereign and the people, and the process of secularization raised matters regarding the legitimacy of dominion. Sovereignty was thus no longer something naturally bequeathed or divinely willed; it henceforth appeared as something of human origin and, hence, as something historically changeable. This shift was prepared by the philosophy of the Enlightenment and by rational natural law. (Imbusch, 2012a, pp. 21–22)

In modern times access to positions of power has had to be justified in different ways than in earlier periods. Since the early nineteenth century, the relations between knowledge and power have become progressively institutionalized and formalized, with power coming to be exercised more and more through organizational structures, rules, and stipulated procedures (see Popitz, 1992, p. 234). These developments have stemmed partly from a number of social megatrends, including the rising rates of literacy, the advent of compulsory education, the bureaucratization of government administration[10] and major organizations, the rise of meritocracy, the professionalization of many occupations, the ever greater reliance on scientific methods and theory in production processes and the overall economy (see Meusburger, 2013), new communications technologies, new modes of governmentality and surveillance, and the democratization of political systems.

These developments have resulted to some extent in a depersonalization of power relations and in the emergence of abstract power structures in which various positions are vested with different responsibilities, decision-making authority, prerogatives, and privileges. Access to these positions, at least in meritocratic societies, has been regulated increasingly by proof of qualification, educational degrees, examinations, screenings, and other selection procedures. With the regulatory system now being "largely impersonal and objective (i.e., without reference to specific persons and social relations)" (Maurer, 2012, p. 364), many positions and acts of exercising power are less visible than they once were. According to Mutschler (2005, p. 259), it is essential that power becomes invisible if it is to be stabilized successfully. However, Münkler (1995) underscores that power enjoys both visible and invisible elements or characteristics and capacities (p. 213; see also Gordon, 2002; Mutschler; Rehberg, 2005; Tanner, 2005). There are circumstances in which power is supposed to be as invisible as possible (e.g., censure, torture, interception of emails, and the falsification of data) and those in which it is ostentatious (e.g., court etiquette, military parades, and press conferences). "Rendering [power] completely invisible divests it of its formative impact" (Münkler, 1995, p. 213). Baum and Kron (2012, pp. 345–346, 353) argue that *liquid modernity* is characterized by an even more successful (more perfidious) concealment of structures and relations of politics (*Herrschaft*) than is *solid modernity* (see also Bauman, 2000; Bauman & Haugaard, 2008). In solid modernity power relations were more visible than in liquid modernity.

In summary, the power of the spirit has played an ever greater role in the exercise of power. In the words of Gustav L. Radbruch (1878–1949), the renowned Heidelberg philosopher of law and Reich Minister of Justice under the Weimar Republic, "Power is spirit: In the end, all power is power over souls. . . . All power rests on the willing or unwilling recognition of those subject to it" (Radbruch, 1993, p. 311). As Napoleon reportedly said after his abortive invasion of Russia, "Do you know what amazes me most in this world? It is the powerlessness of material force. There are only two things in the world, the sword and the spirit. In the long term, it

[10] "Bureaucratic administration means fundamentally the exercise of control on the basis of knowledge" (Weber, 1922/1964, p. 339).

is always the spirit that will triumph over the sword" (as cited in Radbruch, 1993, p. 311; see also p. 156).

Of course, education, training, new technologies, and learning processes in the widest sense were immensely important for economic and social development in past centuries, too. Yet many observers share the view that, since the 1960s, a knowledge society has arisen in which knowledge, research, qualifications, and inventions have higher value than ever before (Bell, 1973; Drucker, 1969; Meusburger, 1998; Richta, 1969, 1977; Rueschemeyer, 1986; Stehr & Ericson, 1992).

This chapter addresses several questions: What interrelations are there between knowledge and power? Can a meaningful semantic difference exist between factual knowledge and orientation knowledge? What functions do factual knowledge and orientation knowledge have in the acquisition and stabilization of power? By which means and why do leaders of orientation knowledge make moral judgments on the Self and the Other? What is the function of myths, legends, collective memories, cultural traditions, and collective identities? Why are propaganda, persuasion, disinformation, censorship, and manipulation of information central features of politics and hegemonic practices? Why do many key purveyors of factual knowledge and orientation knowledge seek proximity to power? And with what methods do the powers that be try to affect the creation and dissemination of knowledge?

Factual Knowledge and Orientation Knowledge: Differences Between Logos and Mythos

What is truth, reality, and objective knowledge? What are the differences between opinion, belief, faith, and knowledge? What categories of knowledge should be discerned? Philosophical questions of this kind have been discussed by a multitude of authors going back as far as Plato (for details see Abel, 2008; Stegmaier, 2008; Stenmark, 2008; Welker, 2008; Wieland, 1982). There is no need to repeat their discussions in this chapter. However, the long-standing efforts in philosophy to tell *logos* from *mythos*, knowledge from faith, and rationality from irrationality are seminal for any research focusing on the relations between knowledge and power. In this chapter part of the old dichotomy between *logos* and *mythos* is represented by the categories called *factual knowledge* and *orientation knowledge*.

Factual Knowledge

Factual knowledge can be thought of as subsuming a wide range of facets: the sum of what has been perceived, discovered, or learned by means of a methodically well-regulated procedure bound to justification, truth, and verification (Abel, 2008, p. 12); empirically verifiable findings; professional skills; expertise required for causal analysis and scientific explanation; practical experience allowing for a degree of predictability; and so-called technoknowledge, which helps solve problems of a technical or scientific nature. The term factual knowledge is thus widely equivalent

to what Mittelstraß (1982) calls *Verfügungswissen* (pp. 16, 62, 103; 2001, pp. 75–76; 2010, p. 22). This category of knowledge is needed in order to achieve a realistic description and analysis of a given situation, to master complexity, to cope with competition, and to manage risks under uncertainty.

To avoid misunderstandings, several categories of factual knowledge should be differentiated. Factual knowledge can be regarded as widely shared, canonized knowledge that is generated by experts and taken as true on the basis of the prevailing state of the art in research. This kind of factual knowledge, according to Felder (2013, p. 14), is divisible into (a) indisputable matters (e.g., $4 \times 5 = 20$; the distance between *A* and *B* is 12,678 miles; the sum of the angles in a triangle equals 180°) and (b) contestable matters provable as true or false only through lengthy empirical examination (e.g., humans influence the climate, viruses can trigger cancer).

Factual knowledge can be distinguished further according to the level of abstraction or generalization by which it is represented. Abstraction and generalization are needed to reduce the information overload, to have principles and laws at one's disposal, and to focus on those categories of information that are most relevant for certain decisions. In different problem-solving situations, decision-makers have to rely on information gathered and represented at different levels of abstraction and generalization. The crucial point is how to choose the adequate level. A map in the scale of 1:200,000 has a higher degree of generalization than a map in the scale 1:10,000, which shows much more detail but may be useless in certain decision-making situations because of its information overload. Gregory (Chap. 4 in this volume) and Leed (1981) demonstrate the gap between abstract factual knowledge and factual knowledge gained by personal experience. In World War I, generals using maps or aerial photographs for their decisions had a different kind of factual knowledge about the battlefield than did the infantry crawling through the mud of the trenches.

> Trench war is an environment that can never be known abstractly or from the outside. Onlookers could never understand a reality that must be crawled through and lived in. This life, in turn, equips the inhabitant with a knowledge that is difficult to generalize or explain. (Leed, 1981, p. 79)

There is also the distinction between abilities that a person acquires subjectively for the most part through repetitive activities over an extended period—long learning processes, for example—and knowledge of facts (experiential knowledge), which can be imparted socially without the individual personally having to submit to the particular experience and without having to go through years of learning (for details see Schütz & Luckmann, 1973). The first variant of this differentiation is exemplified by the craft trades, the ability to play the violin, and the physical and mental performance of an experienced mountain climber. The second variant is illustrated well by a child's socially acquired knowledge not to touch a hot stove. In this second, socially imparted kind of knowledge, intersubjective recognition of knowledge in the sense of communicative constructivism (Christmann, 2013; Keller, 2013; Keller, Knoblauch, & Reichertz, 2013; Knoblauch, 2013a, 2013b) plays a greater role than in the first, subjective category (e.g., the physical performance of the mountain climber). There are situations in which actors do not depend on

whether their competencies or factual knowledge are accepted by others. In some competitive situations, an intersubjective acceptance of new factual knowledge is not desired at all; secret factual knowledge can mean competitive advantage.

Orientation Knowledge

The multifaceted nature and diverse use of the term *orientation* calls for an explanation of its inception. Stegmaier (2008) minutely describes why the concepts of orientation and getting oriented have drawn increasing attention since the nineteenth century, how various philosophers (e.g., Kant, Herder, Fichte, Schopenhauer, Schleiermacher, Buber, Heidegger, Cassirer, and Mittelstraß) have treated the concepts of orientation and orientation knowledge, which categories and definitions they have used, and why the concept of orientation can avoid paradoxes that can confound logic.

The term *orientation knowledge* was created by Kant (1786/1996)[11] and was later specified and popularized by Mittelstraß (1982, pp. 16–20, 50–51, 82, 103). In this chapter I use it[12] generally to refer to revealed knowledge (*Heilswissen*: the salvation knowledge of *religion* and *ideology*), subjective—objectively unjustified—knowledge (myths and legends), spirituality, cultural traditions, and experiences of transcendence.

Orientation knowledge stands in contrast to reality, empirically verifiable facts, and scientific knowledge that is gained incrementally in controlled fashion. As Kant (1786/1996) wrote, "All believing is a holding true which is subjectively sufficient, but *consciously* regarded as objectively insufficient; thus it is contrasted with *knowing*"[13] (p. 13; for details see Stegmaier, 1992, p. 298). Schleiermacher (1814–1815, 1833/1988) conceived of orienting oneself as the "supplement of all real knowledge not attained by way of science" (p. 9).[14] Fichte (1845–1846, p. 195), too, saw orientation as a supplement of real knowledge (Stegmaier, 2008, pp. 103–110). Likewise, the young Martin Buber (1913/1965) juxtaposed the concept of *Orientierungswissen*

[11] This work, first published in October 1786 in the *Berlinische Monatsschrift* (pp. 304–330), became the "most significant document in the critical philosophy of orientation" (Stegmaier, 2008, p. 79). It is where Kant introduced the term *orientation* for "the moral and practical use of reason" (Stegmaier, 1992, p. 298).

[12] In this context the term means religious, ideological, or cultural orientation knowledge, that is, an orientation to values rather than an orientation in space or to facts. Unfortunately, the broad, common use of the word *orientation* can lead to misunderstandings. I retain the term orientation knowledge because the alternatives—*redemption knowledge*, *salvation knowledge*, *revealed knowledge*, *spiritual knowledge*, *religious knowledge*, *religiosity,* and *invisible religion* (Luckmann, 1967)—are too narrow.

[13] *Aller Glaube ist nun ein subjektiv zureichendes, objektiv aber mit Bewußtsein unzureichendes Fürwahrhalten; also wird er dem Wissen entgegengesetzt.* Retrieved October 7, 2014, from tenth paragraph at http://www.zeno.org/Philosophie/M/Kant,+Immanuel/Was+hei%C3%9Ft%3A+sich+im+Denken+orientieren

[14] To Schleiermacher, all knowledge formation was orientation: "Accordingly, all knowledge needs orientation, and no knowledge comes about without it" (Stegmaier, 2008, p. 107).

and reality (for details see Stegmaier, 2008, p. 126). As interpreted by Stegmaier (2008, p. 134), Heidegger linked the concept of orientation with worldview, which guides the life of the individual. Cassirer (1907/1922) classified orientation under "mythical thinking" (p. 619). Scheler (1926), a pioneer of the sociology of knowledge, identified three forms of knowledge:

- *Leistungs- und Herrschaftswissen:* instrumental knowledge and power/knowledge to accomplish practical goals. This category is more or less equivalent to factual knowledge.
- *Bildungswissen*: formative, or self-formative, knowledge to shape the individual's personality
- *Erlösungswissen* and *Heilswissen:* the redemption knowledge and salvation knowledge offered by religions, ideologies, knowledge of aims, and worldviews.[15] This category is equivalent to orientation knowledge.

Orientation knowledge, occasionally also called *symbolic knowledge*,[16] consists chiefly of belief systems, values, cultural traditions, worldviews, ideologies, religions, moral positions, mindsets, action-guiding norms (*handlungsleitende Normen*), and reflection about the ethical conduct of one's life (*Reflexion über die Ethik der Lebensführung*). In other words, it encompasses overall perspectives from which one sees and interprets the world (for details see Mittelstraß, 1982, 2001, 2010; Stegmaier, 2008; Tanner, 1999; see Fig. 2.1).

Orientation knowledge lays a basis for making moral valuations; providing actors and societal systems with a moral compass, ideologies, goals, values, a cultural memory, and a collective identity; strengthening the motivation and internal cohesion of societal systems; and offering rituals to their members and meeting their spiritual needs. "The major mechanisms of power have [always] been accompanied by ideological productions" (Foucault, 1980, p. 102). The same is true both for great cultural achievements and inimical developments. Domination (imperialism, colonialism), for example, endures only if supported by an intellectual discourse or by ideologies and worldviews (Baum & Kron, 2012, p. 344). As Russell (1958) put it:

> Whenever the few have acquired power over the many, they have been assisted by some superstition which dominated the many. Ancient Egyptian priests discovered how to predict eclipses, which were still viewed with terror by the populace; in this way they were able to extort gifts and power which they could not otherwise have obtained. (p. 78)

[15] To Scheler (1926), salvation knowledge, the only noninstrumental variety of knowledge, had the highest value. This view was a notable misunderstanding, however, for religions and ideologies are by no means noninstrumental from the perspective of the person wielding power. On the contrary, they can be among its foremost sources. For further discussion of this concept, see Meusburger (2008, especially pp. 58, 71, 73; 2011, pp. 54–57).

[16] In past publications I, too, have used the term symbolic knowledge (Meusburger, 2005, 2007b). It can lead to confusion, however, because some authors take it to mean knowledge about the meaning of symbols.

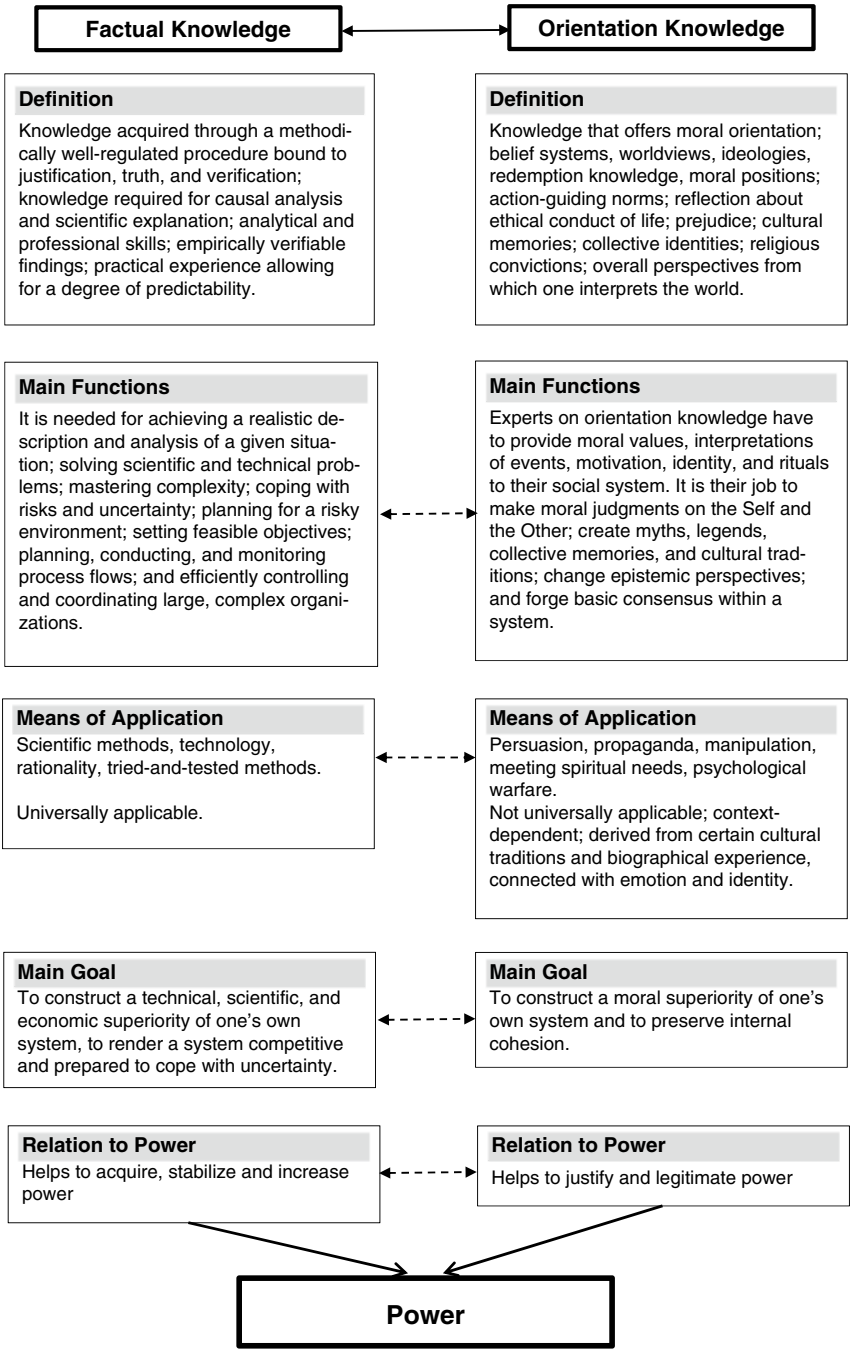

Fig. 2.1 Functions of factual knowledge and orientation knowledge in the acquisition and retention of power (Design and copyright by the author)

Today one is not likely to speak so much of superstition as of worldview, ideology, or religion, but in principle Russell's statement applies to the present as well.

Conceptions and Definitions of Power and Their Relationship to Knowledge

How Can Power Be Conceptualized and Defined?

Conceptions and definitions of power are as manifold and diverse as those of knowledge. One categorization distinguishes between actor-based and system-based conceptions of power. An early proponent of the actor-based view was Weber (1922/1978), who defined power (*Macht*) as actor-specific resources used out of self-interest or as influence *despite* resistance. Power "is the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests" (p. 53).

Parsons (1967) offered a system-related approach. He defined power as "the capacity of a social system to mobilize resources to realize collective goals" (p. 193). To Arendt (1970) "power is never held by an individual; it is possessed by a group and exists only as long as the group remains intact" (p. 44). In other words, power is "the human ability not just to act but to act in concert" (Avelino & Rotmans, 2009, p. 547; Gordon, 2002, p. 133). Systems-related approaches of power tie into concepts such as control and coordination, discourses, decision-making within organizations, and the creation and diffusion of knowledge within and between social systems. "By organizing and arranging their social relations, people simultaneously distribute power" (Imbusch, 2012b, p. 191).

A second categorization differentiates between instrumental, structuralist, and discursive interpretations of power.

> Instrumental perspectives view power as actor-specific resources used in the pursuit of self-interests, referring to Weber's definition. In contrast, structuralist perspectives on power stress that material structures and institutional processes *predetermine* the behavioral options of decision-makers. In addition, discursive perspectives on power emphasize the dominance of ideas, frames, norms, discourses, perspectives, beliefs, and so on. Within 'discursive' interpretations there are those that emphasize the *structural* nature of discourse (such as Foucault) and those that emphasize the *agent-based* nature of discourse (such as Habermas). In some debates 'power and structural constraint are theorized as *opposite ends* of a continuous spectrum', in which power is directly related to agency (Haugaard, 2002, p. 38, italics added). In contrast, Foucault has analyzed power as an inherently *non-subjective* phenomenon that it is exercised *by* structures and *through* actors, contending that individuals are not the subjects, but rather the *vehicles* of power (Foucault, 1980, p. 101). (Avelino & Rotmans, 2009, p. 546)

A third categorization differentiates between innovative, constitutive, transformative, and systemic power (Avelino & Rotmans, 2009; Borch, 2005). *Innovative power* is defined as "the capacity of actors to create or discover new resources" (Avelino & Rotmans, 2009, p. 552). *Constitutive power* is the ability to distribute resources. It is related to institutions and structures that promote social order by

shaping and stabilizing the distribution of resources (p. 552). *Transformative power* is defined as "the ability to transform the distribution of resources, . . . by redistributing resources and/or by replacing old resources with new resources. This involves the development of new structures and new institutions" (p. 553). *Systemic power* is defined as

> the combined capacity of actors to mobilize resources for the survival of a societal system, i.e., a particular continent, region, nation, sector, industry or business (depending on the chosen level of analysis). The extent to which actors are able to mobilize resources for the survival of a system defines the level of 'systemic power' exercised by those actors within that system. (p. 553)

An especially fruitful categorization is Pitkin's (1972) distinction between *power over* and *power to*[17] (see also Göhler, 2011, pp. 225–234). Power over means that an actor has power over other individuals. To put it differently, that person is in a position to follow through on his or her own intentions vis-à-vis those of other people. He or she is able to restrict the range of choices and actions of others. Power over can thus be formulated only within the framework of a social relation.

> Analysis of power relations described as *power over* requires at least one of the participants to be in a position to exercise more power than its addressees can in the power relation. In this case power is a given; it must already exist before it can be exercised. (Göhler, 2011, p. 229)

By contrast, power to does not refer to social relations to other persons. It means an individual ability to exercise power, a power to act, an ability or capacity to move something or reach a goal irrespective of what other people think about it. Of course, power to is also an ability to resist (Göhler, 2011, p. 229). "From the perspective of *power to*, autonomy is construed; from the perspective of *power over*, options for action are restricted" (p. 226).[18]

Yet another categorization differentiates between transitive and intransitive power (Berthold, 1997; Göhler, 2011; Speth & Buchstein, 1997). "Power referenced to the external world is transitive power, that is, power that transmits one's will to others and exerts influence on them. Power referenced to one's own group is intransitive power" (Göhler, p. 236).

In the administrative sphere, power exists mostly as official authority, or *Amtsgewalt* (*potestas*: rule, force, strength, ability, or control), vested with competencies and mandates (see Kobusch & Oeing-Hanhoff, 1980). As the term suggests, such authority is linked not to persons but rather to offices or positions in organizations. It is granted to actors only for a clearly defined period and often only within a specified territory. In Europe official authority has been gaining significance since about

[17] "One may have *power over* another or others, and that sort of power is indeed relational . . . But he may have power to do or accomplish something all by himself, and that power is not relational at all; it may involve other people if what he has power to do is a social or political action, but it need not" (Pitkin, 1972, p. 277).

[18] Drawing on Allen (1999), Göhler (2011) speaks also of *power with* (p. 234), which is understood to mean an ability not just to take action together but to stand shoulder to shoulder in the process.

the twelfth century, when Roman law was reintroduced and the foundations for a state administration were laid by the growing literacy of officials. Jurists had an important part in the organization of administrative power. The resurrection of Roman law in the twelfth century "had in effect a technical and constitutive role to play in the establishment of the authoritarian, administrative, and, in the final analysis, absolute power of the monarchy" (Foucault, 1980, p. 94).

How Can Relations Between Knowledge and Power Be Conceptualized and Explained?

The close relationship between knowledge and power is evident by the very fact that knowledge and power have the same etymological roots. The term *power* derives from the Latin word *potere* (to be able). The Latin noun *potentia* denotes an ability, capacity, or aptitude to affect outcomes, to make something possible. It can therefore be translated both as knowledge and power (see also Avelino & Rotmans, 2009, p. 550; Moldaschl & Stehr, 2010, p. 9; Schönrich, 2005, p. 383).

But knowledge is not just an instrument of power; it is more than something that serves or helps attain it. Several authors assert that there is an internal relation between power and knowledge. Tanner (2005, p. 5) states that power and wisdom are already linked in the Old Testament (e.g., Job 36).[19] Barton (1994) argues "that power cannot be divorced from any communication that presents itself as the truth" (p. 20). Nietzsche (1968), Foucault (1979), and other authors not only equate power with violence, coercion, and repression but also see a productive dynamic in it: "Power has innovative, power-enhancing effects[.] . . . Power releases energies, creates, invents, generates" (Kneer, 2012, p. 269; see also Bublitz, 2008, p. 274). "The exercise of power uses and generates knowledge, and, conversely, knowledge coincides with certain effects of power. In short, no power without knowledge and no knowledge without power" (Kammler, 2008, p. 305). Foucault (1980) coined the double word "power/knowledge" (*pouvoir-savoir*) to show that power and knowledge incorporate each other. To win a measure of insight into the connection between knowledge and power, consider some of Foucault's important statements on the subject:

> . . . the exercise of power itself creates and causes to emerge new objects of knowledge and accumulates new bodies of information. (p. 51)
>
> The exercise of power perpetually creates knowledge and, conversely, knowledge constantly induces effects of power. (p. 52)
>
> Knowledge and power are integrated with one another, and there is no point in dreaming of a time when knowledge will cease to depend on power. (p. 52)
>
> It is not possible for power to be exercised without knowledge, it is impossible for knowledge not to engender power. (p. 52)

[19] For details see http://www.biblegateway.com/keyword/?search=wisdom&version=KJV&searchtype=all

Many authors call attention to the dynamic interrelation of knowledge and power. One of them is Kneer (2012):

> The classical type of power also had a close tie with knowledge, but in modern times there has been a peculiar, reciprocal increase of power and knowledge: Incessant surveillance and control of individuals is bringing forth systematic knowledge, and, conversely, this knowledge serves the continuing increase in power. (p. 273)

Avelino and Rotmans (2009) argue that "knowledge is a meta-condition to meet the four conditions of power (access, strategies, skills and willingness); and . . . that creating or communicating knowledge is also a form of power exercise in itself" (p. 558). The context in which power is exercised relates to both an actor's position (function) within a social system and the place where an action occurs.

To affect other persons and their goals, values, and actions, actors wielding power—regardless of their personal abilities and knowledge—need specific discretionary authority, resources, institutional support, and ways to engage spontaneously in face-to-face contact with other influential and highly qualified actors. These essentials, however, are not available everywhere; they are tied to specific positions within a certain organization and to particular places and milieus. Foucault (1980) noted that power can be exercised especially through operations and interaction within organizations and networks: "Power is employed and exercised through a net-like organization" (p. 98). An academic, high official, chief executive officer, or politician who gives up all institutional affiliations upon retirement may still retain a degree of influence by dint of personal charisma or may occasionally be consulted. But the moment all formal authority, means of power, and resources are relinquished, this person also loses the ability to overcome resistance to his or her goals.

The position a person has in an organization is not the only factor determining what that individual can achieve with his or her abilities. The local potential for spontaneous high-level contact, the knowledge milieu, and the prestige of the place at which an actor discharges most of his or her functions has a bearing as well. This is one of the reasons why academics, top managers, journalists, and politicians, for instance, can be more effective in some places or milieus than in others. When it comes to exercising power, certain places and spatial contexts have always been more important than others.

Power is exercised not only through actions (requests, demands, commands, or attendant gestures) appropriate "for changing another actor's system of convictions and preferences. . . . The very presence of a powerful actor or the presentation of power-coded signs can be an act of exercising power" (Schönrich, 2005, p. 384). What is lacking in official authority or resources can sometimes be made up in prestige (*auctoritas*). For whoever possesses that quality can indirectly exert considerably influence and, hence, power.[20]

In many societal and economic fields, technical competence, domain-specific knowledge, experience, occupational success, and personal integrity are prerequisites

[20] *Potestas* and *auctoritas* were differentiated as two forms of power by Cicero's time (106–43 B.C.) in the Latin-speaking realm (Kobusch & Oeing-Hanhoff, 1980, p. 586).

for building prestige and authority. The art, or science, of persuasion is another foundation of power for exerting influence and moving things (Cialdini, 2008; Kobusch & Oeing-Hanhoff, 1980, p. 586; Tanner, 2005, p. 11).

Asymmetry of Power Relations

Seeking and exercising power is always about creating, preserving, or diminishing asymmetries between the actor (social system) who has it and the actor subjugated to it. One may distinguish between stable and dynamic asymmetries. In some social relations such as those between parent and small child, teacher and student, or jailer and prisoner, the asymmetries in the distribution of power are clear from the outset. In other spheres they stem from differences in resources and privileges; levels of training, qualification, and information; or the results of an occupational selection process, economic competition, armed struggle, or political conflict. That is, this second category of asymmetries in the distribution of power can be changed again. Creating dynamic asymmetries of this nature is about attaining and at least temporarily keeping an edge in knowledge, information, organizational abilities, technologies, and resources and about exerting influence on the production and spread of knowledge.

Such asymmetries are realizable in many ways. When it comes to factual knowledge, some of the possibilities are heavy investment in education, research, and development; immigration of highly qualified actors; development of superior technologies and weapons; research secrecy (see Lappo & Poljan, 1997, 2007; Westwick, 2000); communications espionage (e.g., the scandal currently engulfing the U.S. National Security Agency); betrayal; the encrypting or decrypting of secret information; censorship (Boyer, 2003; Burt, 1998; Malý, 2005; Post, 1998); bans on research; and the plundering of patents in conquered countries (Gimbel, 1990; Harmssen, 1951; Lasby, 1971). As far as orientation knowledge is concerned, such asymmetries arise mostly when standards of definitions or the moral or legal norms applied to oneself differ from those applied to others (Elias & Scotson, 1994; Imbusch, 2012b, p. 185), as when otherness is put down and demonized (the axis of evil) and one's own world and experience is morally glorified.

Most asymmetries of knowledge and power have a spatial dimension and can be studied in various spatial scales. They are expressed by spatial inequalities of various kinds, appear in the hierarchy of central places, and in many domains influence the attractiveness of places, the distribution of resources, and the migration of people.

Can Factual Knowledge Be Clearly Differentiated from Orientation Knowledge?

Before detailed examination of the various functions that factual knowledge and orientation knowledge do have in the acquisition and exercise of power, it is necessary to discuss whether these two kinds of knowledge can be differentiated clearly. The answer to this question depends on the level of analysis (individual person or

goal-oriented social system) and on the type of problem that has to be solved. A person's cognitive processes and actions are based on both factual and orientation knowledge and on emotions, intuitive insights, and automatized (subconscious) routines. However, in some problem-solving situations the individual needs factual knowledge first. In other situations orientation knowledge plays the dominant role. Factual knowledge is acquired and applied in the everyday life-world.[21] It must also prove itself there. Factual knowledge and orientation knowledge complement and influence each other. Orientation knowledge can adversely affect the perception and acceptance of available factual knowledge. By the same token, newly won factual knowledge can modify existing orientation knowledge (e.g., prejudice) whether or not anyone is aware of it. At the level of the individual, it is thus analytically difficult and sometimes not even purposeful to distinguish clearly between factual knowledge and orientation knowledge.

Yet in terms of social systems characterized by a high division of labor, complex structures, and the will to keep them viable, it makes complete sense to distinguish between factual knowledge and orientation knowledge, if only for practical reasons. At that level of aggregation, the two kinds of knowledge serve different purposes. Specialists in generating and imparting orientation knowledge (e.g., priests, mullahs, rabbis, ideologues, propagandists, and spin doctors) have other tasks and roles within a system, need other kinds of occupational competence, and therefore undergo training different from that of people who generate and impart factual knowledge (e.g., engineers, scientists, or medical doctors).

In summary, there are decision-making situations in which one must definitely separate factual knowledge from orientation knowledge because complex sociotechnical systems would otherwise cease to work and would no longer reach their objectives. Without appropriate factual knowledge, it would be impossible to manufacture an airplane, carry out chemical analysis, launch a satellite into geocentric orbit, program software, conduct a research project, or even build a sturdy house. However, every social system requires a body of orientation knowledge in order to define its goals and preserve its internal cohesion, motivation, cultural identity, and collective memory. And the powers that be use orientation knowledge to mobilize their followers, create collective identities, and consolidate power. Once drawn, though, the line between factual knowledge and orientation knowledge is not engraved in stone. It is contingent on culture and time, as shown by the following account of development in the sciences (see also Hanegraaff, 2008; Stenmark, 2008; Welker, 2008).

Unlike the case in the Arabic cultural space, science in medieval Christian Europe served primarily moral, ethical, and theological objectives. Meier-Oeser (2004,

[21] Schütz and Luckmann (1973, pp. 22–34) distinguish between various provinces of reality, namely, those of the everyday life-world, fantasy worlds, and the dream world. "The life-world is something to be mastered according to my particular interests. I project my own plans into the life-world, and it resists the realization of my goals, in terms of which some things become feasible for me and others do not" (p. 15). Only in the everyday life-world do materiality and physicality operate and technologies and competition play a role. Only there can a lead in knowledge develop into economic or political significance.

p. 903) points out that in the Middle Ages *scientia* initially meant something like *doctrina* (a principle or body of principles presented for acceptance or belief) and *disciplina* (a branch of knowledge or teaching). Knowledge of the natural sciences tended to be seen as less important. Medieval science was subordinated to theology. The highest truth was revealed religious truth. "Purely logical reasoning and the testimony of the organs of the senses have only a subsidiary role, and only in so far as they do not contradict the truth of the revealed Scripture" (Sorokin, 1985, p. 229). The notion that rationality (*ratio*) should be emancipated from faith (*fides*) and that scientific thinking should be liberated from the confines of ecclesiastical control was not proclaimed until the twelfth century, the period of academic awakening in the French cathedral schools (Kintzinger, 2003, pp. 142–143).

What is recognized as factual knowledge at time A can be defined as orientation knowledge at time B and vice versa. What is defined as superstition, ceremony, or ritual in European society, shaped as it is by rationalist thought and the credo of individuality, can be regarded by South Sea Islanders as factual knowledge. Gunter Senft's chapter in volume 8 of the series on Knowledge and Space beautifully shows that the knowledge of how to make a traditional canoe on the Trobriand Islands consists not only in the way one chooses and then works a tree trunk but also in the message that a canoe can be made only if one knows the traditional rites associated with each step in the work. Without these rites, the diverse steps in the work cannot be executed. If the rites are forgotten, then it becomes impossible to continue making traditional canoes.

Moreover, it is important with orientation knowledge to tell the external from the internal perspective. What is superstition, faith, or ideology to the external observer can be seen as objective knowledge by the members of a faith community or the disciples of an ideology, for they are more or less convinced that their religion or worldview is true or correct. Adherents of creationism do not doubt that they possess solid knowledge. Many new religious movements (New Age, kabbalah, esotericism) claim that their beliefs are scientifically proven (Belyaev, 2008; Lewis & Hammer, 2011; Zeller, 2011). Many Marxists are convinced that Marx discovered scientific laws of history and that Marxism is an objective science based on facts (for details see Gyuris, 2014, pp. 115–116).

The hard thing for a social system is to find the balance between these two kinds of knowledge and to know which of them should have precedence in which situations, depending on the challenge and problem at hand. In many situations calling for a decision, stressing orientation knowledge more than factual knowledge dulls perception, complicates sober situational analysis, limits self-critical insight and receptiveness to information contrary to favored stances, and even allows inadequately qualified decision-makers into a social system's positions of responsibility, where they eventually harm their own system.

In the course of history there have been repeated attempts—especially by totalitarian systems—to place higher value on orientation knowledge than on factual knowledge. As Russell (1958) put it, "Revolts against reason . . . are a recurrent phenomenon in history" (p. 88). Győri and Gyuris (Chap. 10 in this volume) describe an example of such ideologically driven aberrations. Intent on emulating policies of the Soviet

Union, senior decision-makers in communist Hungary's planned economy of the late 1940s pursued the cultivation of subtropical plants such as cotton, a move that the area's climatic conditions naturally doomed to failure. One of the most remarkable historical blunders due to overemphasizing orientation knowledge and neglecting factual knowledge was The Great Leap Forward in the People's Republic of China (1958–1961). This campaign was ordered by Mao Zedong with the goal of rapidly transforming the country from an agrarian economy into an industrialized society with the help of unskilled people. The Great Leap Forward ended in economic disaster and tens of millions of excess deaths. Most totalitarian states have failed in the long run because they attached more importance to their ideology than to the analysis of empirically verifiable facts and ultimately believed in their own propaganda. They managed to remain in power so long only because they were able to control the spread of information almost completely and because their monopoly on propaganda enabled them to mold much of the population's orientation knowledge effectively over a long period.

Orientation knowledge differs from factual knowledge in many other ways, too. First, orientation knowledge can be reactivated with relative ease even after long phases of repression or censorship following socially controllable learning and information processes. But factual knowledge, once it is proven wrong, only very seldom makes a comeback. Second, tried-and-tested factual knowledge is universally applicable, whereas orientation knowledge has developed within certain cultural traditions and biographical experience. "Key human experiences are condensed and interpreted in orientation knowledge. It remains linked to communities, cultural contexts, and particular institutions that make it possible to cluster, deepen, and abidingly pursue communication about contentious matters" (Tanner, 1999, p. 233).

Tried-and-tested factual knowledge is compatible with many different worldviews, but various categories of orientation knowledge are mutually exclusive for the most part. The adherents of any religion or worldview can use scientific findings (mathematics, chemistry) and technologies (airplanes, computers, weapons) and can benefit from a spread of literacy, a scientific study, or specific qualifications (foreign languages). But it is difficult to imagine someone being both a practicing Moslem and practicing Catholic at the same time or supporting both a communist and a conservative party in the same election campaign.

There are thus exciting, yet little researched, questions to explore. Do the relation and distance between factual knowledge and orientation knowledge change from one era, culture, and ideology to the next? If so, how much? What situations demand a clear demarcation between factual knowledge and orientation knowledge so that a social system remains viable? And in what situations is it unnecessary or even impossible to separate factual knowledge from orientation knowledge because they are too closely intertwined? Telling them apart is surely easier if one goes further and breaks down factual knowledge into natural, experience-based, descriptive, and interpretive sciences, for the divergence between interpretive sciences and orientation knowledge is considerably smaller than it is between natural sciences and orientation knowledge.

Factual Knowledge and Power

Functions of Factual Knowledge in Acquiring and Retaining Power

Whenever those in power want to accomplish their stated goals, secure or expand their dominion and resources over long periods, protect or widen their technological or economic lead, or make their worldview prevail, the social system they control (e.g., an organization, institution, company, army, or state) must continually solve problems and weather crises, competition, transformation, and conflicts. Social systems operating in a contested or highly unstable, dynamic environment can ensure their long-term existence or finally succeed against a rival only if they have sufficient factual knowledge, competence, and absorptive capacity and can avoid making too many poor decisions during recurrent situational analyses and problem-solving.[22] Flawed situational analyses, ideologically incurred lack of self-criticism, and poor judgment owing to inadequate knowledge and information waste resources, lead to political and military defeats, undercut the system's competitiveness, undermine the leadership's authority, and weaken the cohesion of the social system in question. Whoever shares Foucault's (1979, 1990) view that changes and discontinuities are an important trademark of society and describes "social relations as confrontation, as the interaction of operative forces, as continuous overt and covert violence, as war, and as subjugation, but particularly as struggle" (Kneer, 2012, p. 267) will almost inevitably have to address the role of factual knowledge in coping with uncertainty.

Factual knowledge and the capacity for reflection are needed partly for carrying out situational analysis that is as realistic as possible; setting feasible objectives; solving technical and scientific problems; determining the efficient use of energy and resources; planning, conducting, and monitoring process flows; and efficiently controlling and coordinating large, complex organizations. To be successful, outlast competition, or reap business profits, though, one does not need knowledge per se but rather a knowledge-related edge over rivals. Such an advantage in factual knowledge can consist in technological head starts, inventions, or scientific findings. Or it may lie in superior absorptive and analytical capacity and in creativity or intuition that facilitate a social system's detection of possible problems or opportunities and risks of new developments earlier than its competitors do (for details see Meusburger, 2013, p. 17–18).

An operation's success or failure and the longevity of a goal-oriented social system thus heavily depend on how something is perceived, experienced, represented, analyzed, and interpreted in the many iterative steps of the decision-making

[22] The fact that this chapter focuses on competitive societies confronted with an uncertain environment does not mean that possible achievements of collaboration, friendship, or altruism are underestimated. Knowledge and power gained from collaboration and partnership may be even more significant for addressing certain issues. The question is in which scale (family, firm, state, global institutions) and under which preconditions such noncompetitive environments will be feasible.

process; how a social system deals with the knowledge and contradictions of its actors and with its own fragility; and how the knowledge that is thereby obtained influences activities. At root lies Descartes' (1637/2001) old issue of how to distinguish the true from the false (for details see Ricœur, 2005). "How do we know when we are being informed and how do we know when we are being manipulated?" (Wilkin, 1997, p. 12). At each link in a chain of perceptions, analyses, and decisions, mistakes can be made, resources wasted, or advantages gained over competitors. The timely perception of a problem and the apprehension and description of a situation depend primarily on the prior knowledge, capacity for reflection, cognitive abilities, and personal experience of the actors involved. These skills decide whether and how available information is perceived, analyzed, and evaluated by them and whether it enters and broadens their body of knowledge.

The cornerstone of a social system's doom already lies in place if the facts and contexts important for a decision are not sufficiently well known[23]; if problems and developments are not perceived in time; if the information and knowledge needed for a situation's analysis are absent or too abstract; if unqualified actors occupy positions of decision-making responsibility; if one's resources and abilities are overestimated and those of the rivals are underestimated; if the opportunities and risks of a technological, economic, or political development are misjudged; that is, if the social constructs of the important decision-makers are too removed from an intelligible situation or perceivable material reality. This need for clarity is one of the reasons why espionage, deception, and camouflage play such an important role in modern warfare.

History abounds with examples illustrating how highly qualified decision-makers in politics, business, science, and the military or leads in research, technology, productivity, and secret-service intelligence eventually fosters growth in political, military, and economic power and how this edge is lost through technical incompetence, wrong perception, misjudgment, or insufficient adaptability of important decision-makers. Every social system makes mistakes but can partially recover from them by committing additional resources, investing in relevant learning, or exploiting the mistakes of competitors. But a social system suffering from an accrual of poor decisions with onerous consequences winds up squandering resources, creating dependence, eroding reputation, and weakening competitiveness. To survive for long in a dynamic, highly uncertain external world, a social system must be capable of learning and adapting, must have high-ranking contacts to other important systems, and must be able to recognize (anticipate) new developments, risks, and opportunities early. For these reasons those in power need the skills of experts, consultants, and scientists to analyze situations, set achievable goals, seek

[23] The importance of a lead in information was already underlined by the Chinese military general and philosopher Sun Tzu (544-496 B.C.) in his work *The Art of War*: "The general who wins a battle makes many calculations in his temple ere the battle is fought. The general who loses the battle makes but a few calculations beforehand. Thus do many calculations lead to victory and few calculations to defeat." Retrieved November 24, 2013, from http://www.military-quotes.com/Sun-Tzu.htm. Some modern scholars believe that *The Art of War* contains not only the thoughts of its original author but also commentary and clarifications by later military theorists.

alternatives, find solutions to problems, manage major organizations efficiently, build technological leads, and sustain competitiveness. It also pays to keep in mind that the competence, knowledge, and information from which a system gleans a competitive advantage are always rare (see Meusburger, 2013).

In principle, competition between different power centers is about building at least a temporary lead over others in knowledge, technology, productivity, and information that can contribute to political, military, economic, or scientific superiority in a given situation. It need not entail momentous innovations such as the invention of the steam engine, the telephone, the airplane, or the computer. History shows that even small technical changes in a chariot (the Egyptians invented the yoke saddle for their chariot horses in 1500 B.C.), a bow (Hungary, ninth century A.D.), or an equestrian saddle (the Mongol invasion in the thirteenth century A.D.) had great historical import because they gave the corresponding armies a significant military advantage and changed the balance of power for a certain period. In later centuries it was maps, navigational instruments, secret cosmographies, new ship designs, weapons, encrypting machines, missiles, and nuclear bombs that each affected the military, political, and economic power relations for a time.

It is true that scientific disciplines have provided new tools and technologies to improve production, communication, transport, energy use, and space exploration. Modern science has spawned new materials, reshaped industry, changed the management of firms, created new weapons, and has thereby altered the planning and execution of military operations. Most important, modern science "has been decisive in the reproduction of elites and their cultural capital; and it has been central in offering new ideals and social goals, new ways of thinking about the world, nature, and society alike" (Pestre, 2003, p. 247).

The Search for Absolute Truth or Getting on in the Life World?

If the concerns of coping with life, staying competitive, retaining power, or understanding the evolution of social systems are the main interest, there is no need to recount the vast philosophical literature about what truth is, whether there is absolute or objective truth, or whether an objective reality can exist beyond the human perceptual world and language (for an overview see Anacker, 2004; Arndt, 2004; Chomsky, 1987; Gehring, 2004; Hardy & Meier-Oeser, 2004; Knebel, 2004; Knoblauch, 2013a, 2013b; Onnasch, 2004; Pulte, 2004a, 2004b; Zachhuber, 2004). Humans have a basic need for "objective clarity" (Felder, 2013, p. 20), "objective reality" (Berger & Luckmann, 1966, p. 65–146), "recipe knowledge" (pp. 57, 83; Schütz & Luckmann, 1973, pp. 225–226) or reliable knowledge rooted in experience and experiments. They seek assurance that their perception of the world they inhabit is as real as possible and that they can accurately assess the opportunities and risks of what they do.

But aside from solving technical problems (e.g., designing an airplane, building a safe bridge), which calls for proven, experimentally tested and absolutely

reliable knowledge,[24] many situations requiring a decision or successful management of uncertainty do not depend on apprehending an objective reality or possessing an absolute truth. There is often not even the time to accumulate factual knowledge about all the circumstances a situation entails. In those cases, decisions just have to rest on the information and experience one has (see Stegmaier, 2008, p. 14). It is frequently possible to find good, albeit not unshakable, reasons that a particular statement about the independent world is more likely to be true than a competing statement (Gadenne, 1999). "As a consequence of evolutionary development, our mental world, which our brain pieces together with the help of our senses, is so good at replicating the real world, at least some of its key attributes, that we can operate in it successfully" (Penzlin, 2002, p. 73).

Studying the connection between factual knowledge and power is not about grasping and describing a reality that exists independently of human sense perceptions but rather about realistically judging a situation, finding one's way in the world, solving practical problems, performing specific tasks, and coping with unforeseeable challenges. Humans, with their limited cognitive abilities, will never be able to grasp reality in its totality. They can only try to approach fragments of reality asymptotically. If actors or social systems are to survive in an extremely competitive, volatile environment, they must be able to adequately size up the constraints of the external world in which they want to reach a specified goal, to ascertain their resources and possibilities, and to draw the proper conclusions from those considerations. In such situations the materiality of the environment and the corporality of acting individuals have a special importance.

The position taken in this section appreciates the concepts of communicative constructivism (for details see Christmann, 2013; Keller, 2013; Keller et al., 2013; Knoblauch, 2013a, 2013b) but takes exception to the arbitrariness of radical constructivism, which casts the world as nothing but a construct of the brain and recognizes only the existence of subjective truths. The statements of radical constructivism are banal if one does not simultaneously ask why actors with different experiences and disciplinary qualifications arrive at different social constructions and which impacts realistic and unrealistic constructs can have for the actors or the system to which they belong. A social construct's quality, or "verisimilitude" (Pulte, 2004a), depends mostly on knowledge and abilities resting on earlier experiences and learning processes that enable the actor to glean patterns from clues and incomplete information (Liebenberg, 1990), to analyze and interpret those patterns, and to come to the conclusions that are correct or helpful for the attainment of a particular objective.

When analyzing a situation, solving a problem, accomplishing a goal, or reducing uncertainty, a person can distinguish realistic or appropriate, useful, and adequate social constructs (e.g., situational analyses, circumstantial judgments, and market

[24] Even well-founded knowledge is not always the "truth" but rather knowledge acquired according to the prevailing rules by means of approved measurement methods. In other words, it can turn out differently depending on what measurement methods are applied (see Cicourel, 1974). Views may differ on the rules and the measurement methods to be used. The submission of results, however, makes it possible to judge how reliable a given knowledge was and whether it was justifiably relied on.

analyses) from unrealistic, inadequate, or loss-incurring ones. When results have become available, it is possible to say, at least with hindsight, that particular statements have described a given situation or the perceivable world more accurately than others, that certain social constructs have weathered competition or conflict situations better than others, and that "the subjective criteria of truth . . . must not stray arbitrarily far from their objective grounds" (Puster, 1999, p. 99). As aptly (and ironically) stated by the evolutionary biologist George G. Simpson (1963), "the monkey who did not have a realistic perception of the tree branch he jumped for was soon a dead monkey—and therefore did not become one of our ancestors" (p. 84). Unrealistic social constructs based on deficient knowledge and lack of experience and information are among the most salient causes of failure of actors, organizations, and states.

Orientation Knowledge and Power

What Functions Does Orientation Knowledge Have for a Social System?

In addition to a basic need for clarity, human beings have a basic need for moral and cultural orientation, especially when looking for meaning or, as political animals (*zoon politikon*), when making decisions shaped by interwoven interests (Felder, 2013, p. 20). Imparting orientation knowledge is not about the search for a scientifically verifiable truth and not about objectively provable facts. Nor is it about exact and objective descriptions or situational analyses that are as realistic as possible. Specialists in generating and imparting orientation knowledge have the task of communicating goals; interpreting events[25]; giving values, motivation, identity, and legitimation to their social system; and forging basic consensus within a system. It is their job to make moral judgments on the Self and the Other and to change epistemic perspectives. They are expected to manufacture myths, legends, collective memories, cultural traditions, and identities; make them prevail over rival stocks of knowledge; and hand them down to the next generation. Religions, ideologies, cultural memories, and worldviews are the binding agents of the social system and are the lever that is used in attempts to morally denigrate, discredit, or demonize opposing systems. Concepts of orientation knowledge are not purely intellectual devices; Eurocentrism was not just an idea. "The accounts drawn up under its sign had acutely material consequences" (Gregory, 1998, p. 14).

It goes without saying that there exist numerous historical and contemporary examples of how orientation knowledge (e.g., world religions) has contributed to mutual understanding, societal harmony, peaceful coexistence, personal and collective identity, empowerment, and great cultural achievements. However, orientation

[25] For Nietzsche, all will to power is interpretation. The stronger person determines the moral standards and the criteria of truth and defines the worldview. The weaker person is subjected to outside perspectives and values (Speth, 1997, pp. 274, 277).

knowledge has also been misused by institutions of power and applied in order to persuade, to manipulate, to pursue psychological warfare, and to feign moral superiority. The rest of this chapter focuses on such abuse because examples thereof disclose with striking clarity the main mechanisms of how orientation knowledge conduces to political power in competitive situations.

Orientation knowledge is often used to legitimate power. Every kind of power needs justification and therefore strives for legitimation (Popitz, 1992, pp. 17, 66). The legitimation of power can occur in very different ways, depending on the era, the authority structures, and the culture involved. However, many attempts to legitimate power are assertions that the center of power (e.g., tribal chief, government, party boss, corporate management, army high command, or university president) knows more or is wiser or more competent than the rest of the organization, can judge better than others what is right or promising, and has sources of information that others do not. This point is especially conspicuous in totalitarian states or fundamentalist theocracies, where there is just one truth and one correct interpretation and where protest is punished. In totalitarian systems (e.g., Stalinism, Maoism, and National Socialism), the center—usually the mass leader—claims to be infallible and can never admit error. "The assumption of infallibility, [however], is based not so much on superior intelligence as on the correct interpretation of the essentially reliable forces in history or nature, forces which neither defeat nor ruin can prove wrong because they are bound to assert themselves in the long run" (Arendt, 1951, p. 339).

Depending on the era, exponents of orientation knowledge have claimed to receive messages from the gods or from ancestors; to have the ability to interpret signs from gods, dreams, and oracles; to be inspired by the Holy Spirit; to possess sacred books, to own secret knowledge or divine wisdom revealed from generation to generation only to a small elite of insiders (Dan, 2007; Halbertal, 2007), to stand for the will of God on earth, or to be better positioned than others to interpret holy scriptures (the Bible, the Koran) or the publications of Marx, Lenin, and Mao. It has been argued in Christian Europe and other cultures that the rulers have been granted their power by God or the gods (see Fig. 2.2). Emperors and kings in Christian Europe ruled "by the grace of God" (Tanner, 2005, p. 4).[26] Their power was thus doubly protected—by popular obedience from below and by their function as a servant of God from above (Röttgers, 1980, p. 592).

The manifestation of such needs for legitimation lay also in the fact that the emperors of the Holy Roman Empire were crowned by the pope, an act staged to express the divine will sanctioning their rule. These contentions by the communicators of meaning that they are able to appeal directly to God or mediate between God and the people have long been represented pictorially. In Christianity the dove has stood as the symbol of the Holy Spirit, as evidence of a direct link to God. In Fig. 2.3, for example, the thoughts that Saint Gregory is to write down are received

[26] This understanding of power comes from Paul's letter to the Romans, "Let every person be subject to the governing authorities; for there is no authority except from God, and those authorities that exist have been instituted by God" (Romans 13:1, New Revised Standard Version).

Fig. 2.2 The apotheosis of Holy Roman Emperor Otto III (A.D. 980–1002). This representative example of medieval dynastic iconography shows Otto surrounded by an aureole, which is otherwise confined to depictions of Christ. In keeping with the medieval concept of rule, the image expresses the idea that Otto, by virtue of his imperial coronation, has himself become Christ, the Annointed One. Otto's status is confirmed by the Hand of God that appears in the blue nimbus above across. The Hand is crowning the emperor, who spreads his arms in the pose of crucifixion (Source: Liuthar Evangelar. Copyright: Domkapitel Aachen. Photograph: Pit Siebigs. Reprinted with permission)

Fig. 2.3 St. Gregory receiving the words he is to write down. He hears the message directly from the Holy Spirit, which is symbolized by the dove sitting on his shoulder (Source: Meister des Registrum Gregorii. (Trier, Stadtbibliothek, Hs. 171/1626). Reprinted with permission)

by him through the dove sitting on his shoulder, that is, directly through the Holy Spirit. For centuries, therefore, the assertion of having a lead in knowledge has been one of the most effective ways to legitimate power.

Another way to legitimate power is to produce narratives maintaining that a dynasty is of divine origin (e.g., the Japanese imperial family) or that the roots of the ruling family extend far back in history. Some rulers in Islam used to attribute their legitimacy to their descent from Mohammed. Reza Pahlavi, the Shah of Persia, traced the ancestry of his dominion back to Cyrus the Great (ca. 500 or 576 B.C. to 530 B.C.), an Achaemenid ruler and the founder of the Great Persian Empire.

Leading figures of orientation knowledge are as useful as they are to a ruler mainly because they determine the moral norms, the criteria of truth, and the ideology and worldview favored by the ruler (see also Speth, 1997, p. 274). These shapers of the dominating ideology define which arguments, terms, and definitions are politically incorrect and which historical events may or may not be compared. They endorse patriotism, emotional identification with an institution or ideology, and the social cohesion of social systems. Religions, ideologies, and collective memories are an essential part of individual and collective identity. Orientation knowledge that meets with general social acceptance because it is traditionally considered true or correct in certain segments of the population or in particular territories can become enormously effective and dynamic. It can move people to go to great lengths, make immense sacrifice, persevere in difficult situations, or even die as martyrs for a "good cause." Because orientation knowledge is not subject to any scientific proof but instead is revealed by an authority and cannot be proven false, experts on orientation knowledge have far greater potential to influence, mobilize, and deceive people than natural scientists or engineers do. Elements of orientation knowledge are easier to convey to masses of people than scientific knowledge is.

Because orientation knowledge influences affectivity, it can also function as a filter for taking up information from the opposing side. External knowledge that shakes one's identity (self-image), exposes one's religious and political convictions to ridicule, or presents a history completely different from what one has experienced or has been taught by parents or other trustful persons is emotionally repudiated or repressed.

The Role of Orientation Knowledge in the Construction of the Self and the Other

Many conflicts and the tenacity with which they are dealt arise largely when two mutually incompatible bodies of orientation knowledge collide. In conflict regions such as the Balkans, Northern Ireland, or the Near East, each of the adversarial groups has created its own narratives, collective memory, and interpretation scheme. Each of them cultivates its own truth, basic consensus, and cultural memory through narratives, symbols, and figurative or metaphorical representations (e.g., monuments) and tries to keep its own region of influence free of the opposing party's interpretations.

The production of "geographical imaginations" (Gregory, 1994) or "imaginative geographies" (Gregory, 1995) is always articulated within a system of difference (Gregory, 1998, p. 20). The construction of collective identity (ethnicity, national consciousness, patriotism, basic consent) is all but inconceivable without demarcation between "Us" and the "Others." Distinguishing between the "sacred" and the "profane" or between the "self" and the "other" is inevitably tied to moral judgments, prejudices, and stereotypes.

Prejudices are presumably as easy to stoke as they are—and as difficult to eradicate—because associations between people and traits or between events and feelings form in an area of the human brain that lies beyond one's control. In the course of early human evolution, stereotypes and prejudices had a major part in survival. Habitualized schemata help the brain to accelerate its processing of information, to retrieve experiences and evaluations instantly with little cognitive effort, and to make decisions immediately (Brown, 1995; Leyens, 2001).

Dichotomies such as "we" and "the others," which are probably a foundation of nearly all ideological, religious, or ethnic conflicts, are imparted in early childhood within the family and other primary groups, that is, by the persons in whom one first establishes trust and to whom a close emotional relation exists. One learns in early childhood that strangers can pose a threat. Later, it is learned from the communicators of orientation knowledge that the "others" (the barbarians, nonbelievers, heathen, savages, or terrorists) have repeatedly inflicted injustice and violence on one's own group, that the others were the perpetrators and the members of one's own group were the innocent victims. Such attitudes and values are acquired in the primary community, not through conditioning in the sense discussed in modern learning theory but rather through emotional exchange with persons in whom one trusts and on whom one depends (Meier-Seethaler, 1999, p. 151). The fact that an individual recognizes mostly the good in his or her "own group" and tends to think the other side to be capable of inhumanity and atrocities partly springs from people's greater receptiveness to information that corresponds with their prejudices. Prejudices spare strenuous thinking. They enhance the cohesion of one's group and shield one's self-esteem (Leyens, 2001, p. 11987).

Orientation Knowledge and Moral Exclusion

An especially important task of people versed in orientation knowledge is to define and categorize situations, historical events, persons, and organizations and to construe their side's moral superiority. The same person in a given conflict can be defined as a terrorist or a freedom fighter, as a hero or a war criminal, as a patriot or a traitor. A messianic political agenda, a religious conviction of personal mission, and the firm conviction to be God's chosen people are particularly effective not only at creating identity but also at promoting moral ostracism and the double standards that stem from it.

As shown by the history of religion as a concept, the mechanism of moral ostracism has been practiced since ancient times. The Romans used the term *religio*

only for their own cult. They did not grant the other cults in the empire the status of a religion but rather marginalized them as *superstitio* (Feil, 1986; Kerber, 1993). Later, Christianity appropriated the term *religio*, along with many other insignia of ancient Rome, exclusively for itself, with *superstitio* being used as a battle cry in the struggle against all other cults. The word *religion* was not used for non-Christian religions until after the Enlightenment.

Morally ostracizing the opponent depersonalizes, dehumanizes, and demonizes that person. The attendant propaganda aims to persuade people that their own group has a divine mission; embodies the only true religion; stands on the side of morality, historical necessity, or incontrovertible truth; or represents God's chosen land in the fight for freedom, world peace, human rights, and democracy. These teachings make the opponents out to be barbarians, subhumans, infidels, heretics, terrorists, criminals, or class enemies. Leaders of orientation knowledge ensure that their own side uses moral standards or legal codes different from those of the others. The laws of war, the Geneva Convention, and the International Court of Justice in The Hague apply to one side, and the others can ignore them with impunity. If opponents are depersonalized, demonized, and confined in a no-man's land devoid of rights and protection (e.g., Guantánamo Bay, the U.S. military prison camp at the southeastern end of Cuba) as terrorists, or unlawful combatants, they can be treated differently than prisoners of war, who are protected under the Geneva Convention. The dehumanization of the opponent and the dogma that one's own side embodies absolute good, and the other side absolute evil, go to rationalize and justify the use of force. They are also necessary for torturers to lose their inhibitions and sense of injustice.

> The enemy is demonic and the saints are perfectly pure, no matter what they may do in battle. These images have been presented in so many movies, stories, comic books, and newspapers that they have etched themselves firmly in the national consciousness. (Jewett & Lawrence, 2003, p. 222)

> This division of the world into good and bad people is a crucial component of the Captain America complex, visible in World War II, the Cold War of 1945–90, the Vietnam War, the Gulf War, and the current "war on terrorism." None of these struggles would have occurred as they did without such stereotypes. (Jewett & Lawrence, 2003, p. 215)

The dichotomy of good and evil always figures in conflicts. It is part of the oldest myths and is highly effective. Each of the parties to a conflict tries to present itself as a moral authority, the representative of a superior civilization, or an instrument of God ("God's own country," "the chosen people") that is fighting against the darkness, unbelievers, pagans, barbarians, or terrorists and seeking to spread the blessings of civilization (see Jewett & Lawrence, 2003; Chap. 7 by Jewett in this volume; Gregory, 2004). Abrams (1969), Jewett and Lawrence, Weinberg (1935), and many others describe how the concept of Manifest Destiny (one nation under God) determined expansionist American policy from the outset. Derived by the Puritans from the Old Testament and popularized around 1840, it rested on the premise that the United States was the "holy nation" referred to in Exodus 19:6 and that it had a divine mission. John Winthrop the Younger (1606–1676), a prominent Puritan leader, convinced his followers that their nation would become "a guiding light,"

an "example to the whole world," and a "bulwark against the kingdom of Anti-Christ," meaning the Jesuits (Winthrop, 1869, vol. I, pp. 309–311). Whoever had such a divine mission could, according to Jewett and Lawrence, take ruthless action against enemies.

> The unquestioned premise was that a victorious crusade would truly make the world safe[,] . . . that the destruction of the demonic Beast would automatically bring the world under the control of the saints (p. 74).

> The biblical tradition of redemptive violence was popularized in Western culture by the Crusades, and it was then taken up by the Reformation in England. . . . Puritanism developed the crusading impulse of the Old Testament to the logical extreme (p. 250).

The massacre of the Native Americans was justified in the United States with similar concepts and arguments, as were all subsequent wars. "The bloodthirsty savages had to be radically decontaminated for inclusion in the kingdom of the saints; and if they refused, annihilation was the logical solution" (pp. 253–254). The following passages present only a few examples illustrating the rhetoric of Manifest Destiny passed along by newspapers, films, school texts, novels, and comic books (e.g., *Captain America*), beginning with a statement John Adams wrote to Thomas Jefferson on November 13, 1813: "Many hundred years must roll away before we shall be corrupted. Our pure, virtuous, public spirited, federative republic will last forever, govern the globe and introduce the perfection of man" (quoted in Jewett & Lawrence, 2003, p. 221). The United States was repeatedly portrayed as a chosen land in American literature. As Herman Melville wrote in his novel *White Jacket* (1850/1970), for instance,

> we Americans are the peculiar, chosen people—the Israel of our time; we bear the ark of the liberties of the world. . . . Long enough have we been sceptics with regard to ourselves, and doubted whether, indeed, the political Messiah had come. But he has come in us, if we would but give utterance to his promptings. (p. 151)

In January 1900 historian and Senator Albert J. Beveridge supported the Spanish-American War in the Senate with the words, "Almighty God . . . has marked the American people as the chosen nation to finally lead in the regeneration of the world. This is the divine mission of America . . . We are the trustees of the world's progress, guardians of the righteous peace" (Congressional record, 56th Cong., 1st Session, vol. 33, p. 711, as quoted in Jewett & Lawrence, 2003, p. 3). Addressing the Harvard Club in 1917, Theodore Roosevelt stated upon the U.S. declaration of war on the Axis Powers that year: "If ever there was a holy war, it is this war" (Jewett & Lawrence, p. 73). The entry of the United States into World War I was favored by preacher Randolph H. McKim, too. In Washington, D.C., he declared,

> It is God who has summoned us to this war. It is his war we are fighting . . . This conflict is indeed a crusade. The greatest in history—the holiest. It is in the profoundest and truest sense a Holy War. . . . Yes, it is Christ, the King of Righteousness, who calls us to grapple in deadly strife with this unholy and blasphemous power (Abrams, 1969, p. 55).

Speaking at the annual convention of the National Association of Evangelicals on August 3, 1983, Ronald Reagan called the Soviet Union an "evil empire." And on

January 28, 1991, George H. W. Bush characterized the first Gulf War in terms such as "good versus evil, right versus wrong, human dignity and freedom versus tyranny and oppression" (Jewett & Lawrence, 2003, pp. 2, 328). Likewise, the second Gulf War against Iraq was described by George W. Bush as a "monumental struggle of good versus evil" (Sandalow, 2001, p. A7). Similarly impressive moral self-aggrandizement and demonization of the opponent exist in numerous other countries as well.

It is the job of the cultural-awareness industry to mount targeted campaigns for a government, political party, business organization, or some other entity to spread rumors, withhold news, defame individuals, and supply public media with sanitized data and manipulated images in order to focus on particular topics and capture people's hearts and minds (see Maresch, 2002, p. 250). The result is that each party to a conflict can assume that it is serving a worthwhile aim, that it is acting in the name of God, morality, justice, or world peace. Along the way, religious convictions are used for political ends and political ideologies are supercharged into political religions (Tanner, 2005, p. 7).

> [P]owerful institutions and dominant social groups in modernity have been able to establish a hegemonic position whereby conceptions of what is good, true, real and universal have taken on the appearance of natural laws which bind us to a specific and seemingly inevitable social order. (Wilkin, 1997, p. 11)

Even in conflicts of a purely economic or imperialistic nature, the exponents of orientation knowledge have the task of morally justifying what their own side does. They are expected to use arguments suggesting, for example, that imperialism and colonialism are a dissemination of civilization or that a dispute over oil reserves is a struggle for democracy, freedom, and human rights. Propaganda, persuasion, psychological warfare, disinformation, camouflage, and manipulation are central features of politics, hegemonic practices, and warfare.[27] Truth is always the first victim of war. Propaganda "serves the purpose of disseminating a range of values, beliefs, and codes of behavior with which to develop and maintain popular support for the existing social order" (Wilkin, 1997, p. 122; see also Herman & Chomsky, 1988). At the heart of propaganda lies a core ideology uniting elite groups of a political system. Propaganda is about persuading and influencing the human being's inner self, heart, or conscience. "Whoever has power over people's hearts finds a following" (Tanner, 2005, p. 7).

As early as the beginning of the twentieth century, Mauthner (1910, p. 235) regarded language as the most important means of orientation for human beings. Because it is possible to affect the thought structures, discourses, and emotions of people and the legitimacy of actions through selected language regulations or prescribed terminologies, most conflicts involve clashes over the substance and "correct" use of terms. The use and misuse of language, or the relation between language, ideology, and power, are topics in which many authors are engaged (Arendt, 1951; Felder, 2013; Girnth, 2002; Herman & Chomsky, 1988; Imhof, 1996; Jäger, 2013; Marxhausen, 2010; Radeiskis, 2013; Schelsky, 1975; Wilkin, 1997). The party

[27] The famous Chinese military general and philosopher Sun Tzu (544–496 B.C.) stated, "All warfare is based on deception." Retrieved November 24, 2013, from http://www.military-quotes.com/Sun-Tzu.htm

whose vocabulary manages to win out in the public discussion has already won half the battle. Those embroiled in a conflict therefore do all they can within their sphere of influence to monopolize the use of words, the interpretation of texts and images, and the "power to define reality" (Imhof, 1996, p. 217), that is, to claim supreme authority over the discourse. It is about determining what is talked about and where; what kinds of labels are used; what gets pushed aside; what forms of power are intrinsically linked with the forms of speech; and in which institutions, mechanisms, and structures of global power the speech praxis is structurally embedded (Detel, 1998, p. 33).

Even tiny differences in vocabulary can have serious legal and political consequences, so the use made of words may be of the highest political significance. A historical event will be classified as a war crime, a crime against humanity, a violation of international law, or simply a migration, depending on whether it is seen as expulsion, ethnic cleansing, deportation, relocation, resettlement, or transfer. The term *wall* triggers political associations other than what the words *fence* or *peace border* suggest. In the German Democratic Republic the designation *new citizen* was an attempt to repress the historical experience of expulsion after World War II. The public impact of the word *torture* differs from that of *enhanced interrogation techniques.* Rather than say *war of aggression*, people find it more palatable today to refer to a *preemptive strike*. Whereas the U.N. High Commissioner for Human Rights, Louise Arbour, described waterboarding as torture, the Bush administration reclassified that technique and others as "alternative interrogation procedures" (Head, n.d., par. 2 & 5; "U.N. says," 2008, par. 1).

As far as the vocabulary of ideology is concerned, it is nomination theory, or the theory of language, that distinguishes between symbol words, whose function is to describe complex reality in condensed form, and words of demarcation, which ballyhoo a stance taken by a political party (see Marxhausen, 2010, pp. 222–223). Positively loaded symbol words or Miranda words ("that which must be admired," from *mirari*—to admire) include *peace*, *freedom*, and *justice*. Examples of negatively loaded symbol words (anti-Miranda) are *dictatorship*, *racism*, *torture*, and *terror*. Words of demarcation differentiate between positively loaded flag words, which raise the status of one's own group (*freedom fighters*), and negatively loaded stigma words (e.g., *terrorist*), which are intended to defame the opponent (see Girnth, 2002, pp. 53–54; Marxhausen, p. 223).

One of the most effective forms of language regulation is the coinage of *new* words that stress the unique nature of an event and thereby preclude comparisons with similar events. Another method of manipulation is to individualize and generalize events. In these cases torture and war crimes committed by one's own side are usually attributed to culpable individuals, and comparable crimes of the opponent are blamed on their system (e.g., nation, ethnic group, or political party). The torture and sexual abuse of Iraqis in the Abu Ghraib prison was attributed to individual soldiers and branded as un-American, for such practices were said to be inconsistent with American national character. But use of the generalizing term *national character*[28] suggests that such crimes can indeed be linked to the national character of other countries.

[28] Application of the term is predicated on a spatial dissemination of particular character traits, so the territory's residents—individually screened or unscreened—can be labeled with certain traits.

Yet another method of manipulation is the personalization and anonymization of victims. A personalization of one's own sacrifices is calculated to engender sympathy and to provoke outrage at the opponent. Making the opponent anonymous or invisible is supposed to desensitize or disengage one's conscience. Under totalitarian regimes executed opponents and the people killed through ethnic cleansing have usually been buried in anonymous mass graves. The dead have been deliberately stripped of their names and, if possible, their grave sites kept secret to prevent memories from surviving at those places. Whereas one's own war dead are treated as individuals, each with a name and a biography, the victims on the opposing side are called collateral damage allegedly unavoidable in strikes against military targets even in a clean war.

The point of following such language rules is to bring about an inequality in perception, evaluation, tolerance, grievance, and outrage. It is the foundation of every double standard and is one of the most important instruments of power in the information society. Semantics and the use of symbol words allow "inferences about the thinking and action of a speech community" (Girnth, 2002, p. 52), a topic that ought to be examined more vigorously in human geography than it has been.

Moral ostracism is nearly always linked with spatial exclusion. The "good" and "bad" are each localized and become the stuff of imaginative geographies (Said, 1978). For without precise localization, the bad cannot be attacked. "Imaginary geographies . . . are constructions that fold distance into difference through a series of spatializations . . . by multiplying partitions and enclosures that serve to demarcate 'the same' from 'the other'" (Gregory, 2004, p. 17). "Geography is inextricably linked to the architecture of enmity" (Shapiro, 1997, p. xi).

With Which Methods Do Power Centers Influence the Creation and Spread of Knowledge?

Manipulation of Epistemic Perspectives

From the very beginning of human history, the powers that be have always tried to legitimate and retain power and engender loyalties. They have done so by controlling the spread of information and generation of knowledge and by ensuring that the values, cultural norms, and interpretations of historical events conducive to their power prevail in public opinion. These components constitute what Gerhardt (1992) calls the "epistemic perspective": "Just as each act of seeing quite naturally entails an optical perspective, each act of cognition is linked to an accompanying epistemic perspective" (p. xii; see also Fellmann, 1992; Kaulbach, 1990). Tanner (1999) explains further that "all action predicates interpretive understanding and familiarity with systems of symbols. It is with such systems that our image of the world as a whole and our place in it arise" (p. 237).

Orientation knowledge, collective memories, traditions, and symbols that fashion a cultural, ethnic, or national identity must constantly be reorganized, practiced, and imparted. "Culture does not exist of things, people, behavior, or emotions, but in the forms or organization of the things in the minds of the people" (Goodenough, 1957,

pp. 167–168). If power is defined in part as the ability to change the epistemic perspective and motivational structure of other people selectively (Detel, 1998, p. 21), then those in power either have to work closely with media experts or control them as much as possible. State institutions therefore try to "manufacture consent" (Herman & Chomsky, 1988; Lippmann, 1955; Rehberg, 2005; Wilkin, 1997) and to dominate or monopolize media coverage and interpretations of events. To do so, they resort to methods ranging from shutting down radio and TV stations, imposing censorship, embedding journalists, intimidating opponents, enforcing secrecy, and creating forgeries to exerting subtle influence through language and artwork.

> For this purpose they have a range of mechanisms from the use of experts and state officials to legitimize the state's response to an event, the planting of stories in the media, the bribery of journalists, the setting up of newspapers, magazines, radio stations and such like, through the more straightforward forms of propaganda such as lying, deception and misinformation. (Wilkin, 1997, p. 126)

One of the most radical historical examples of the manner in which political power could determine orientation knowledge within the territory it controls was the principle known as *cuius regio, eius religio* (Who rules, his religion). Anchored in the Peace of Augsburg (1555), this principle permitted the sovereign princes of the Holy Roman Empire to stipulate the confession (Lutheran, Calvinist, or Roman Catholic) to which the population of their respective domains were to belong.[29] In later centuries the communist systems, National Socialism, and fundamentalist theocracies also attempted to force such homogeneity upon orientation knowledge and to make their ideologies dominant.

Control of Access to Information, Censorship of Information, Bibliocide, and Memorycide[30,31]

Censorship, forgery, deception, disinformation, and memorycide have been among the instruments of rulers for more than two thousand years (see Post, 1998). Collective memories or shared knowledge call for specification of what is considered worth knowing. "The dispute over the admissibility of bodies of knowledge ran through the entire Middle Ages" (Kintzinger, 2003, p. 89). In the medieval monasteries the abbot determined what kind of knowledge was regarded as wholesome or "good"

[29] Persons not wishing to accept the sovereign's decision were granted a grace period during which they could resettle in a region allowing them to practice the religion of their own choice. The Electors residing in Heidelberg switched their religious affiliation seven times between 1556 and 1716 (Baar-Cantoni & Wolgast, 2012, p. 67). On each of these occasions, the professors at Heidelberg University had to choose between changing their confession or leaving the university.

[30] Some of the thoughts and arguments in this section have been published in other works of mine as well (Meusburger, 2005, 2007a, 2007b, 2011).

[31] The culture of memory is also manipulated through graphic representations and placement of monuments. Manipulation through pictures is even more effective than that through words (for a thorough discussion see vol. 4 of this series, *Cultural Memories*).

for the monks (whatever promoted the salvation of the soul), what kind was "detrimental" or wrong (divergent doctrine, heresy, whatever detracted from the salvation of the soul; pp. 61–62).

> The abbot decided for the monks of his monastery . . . which texts and books . . . were permitted to be borrowed from other cloisters for copying and which of its own were allowed to be passed on to those places. What was read by or to the monks as a community and what the monks read individually was subject to strict control. (p. 61)

The distinction between good and disapproved knowledge and between wrong and right sources of knowledge is also fundamental to many political ideologies. Censorship and secrecy are practiced especially if awareness of certain information would threaten one's self-image or the moral exaltation of one's social system. The most extreme manipulation of information arguably occurred under twentieth-century totalitarian systems and hegemonic democracies, which mastered techniques of faking photographs and documents. King (1997) thoroughly documented the manipulation of photography and art in the Soviet Union, showing that political purges not only liquidated Stalin's opponents but had to erase all memory of them in publications as well. As soon as members of the ruling apparatus fell out of favor, their images were deleted from encyclopedias, history books, and school texts.

It is also possible to manipulate information by eradicating published books (bibliocide) and preventing manuscripts from being printed. From the time the Bolsheviks seized power in Russia in 1917 to the collapse of the Soviet Union in 1991, approximately 100,000 book titles were added to the index of banned publications, and more than one billion printed books were destroyed there (Ingold, 2005). In Czechoslovakia, where the *Guide for Monitoring Book Inventories in Libraries of All Types* was published as late as 1953 (Míšková, 2005, p. 237), around 27.5 million books were destroyed by the end of the 1950s (Pešek, 2005, p. 247). A central administration for publications was set up in 1966 to "protect the interests of socialist society." This institution was responsible for ensuring "that no information contradicting other interests of society is published in the mass media" (Malý, 2005, p. 230). In Germany the National Socialist propaganda machine managed to control media reporting almost completely. "Wherever totalitarianism possesses absolute control, it replaces propaganda with indoctrination and uses violence not so much to frighten people (this is done only in the initial stages when opposition still exists) as to realize constantly its ideological doctrines and its practical lies" (Arendt, 1951, p. 333).

Democracies, too, control and manipulate sensitive information through an array of measures. In some of these countries, for instance, certain documents are locked away in archives longer than is legally required, and the history books used in schools are particularly graphic examples of manipulation. In the United Kingdom a system introduced in 1912 as the Defence Notice (D-Notice) is still in force in 2014 (renamed in 1993 as the Defence Advisory Notice, or DA-Notice). Under its provisions the British government may request on grounds of national security that news editors not broadcast specified information or disseminate it in

any other way.[32] In June 2013 a DA-Notice was issued asking the media to refrain from running further stories related to the US PRISM spy program and British involvement therein (DA-Notice, n.d., final par. under "United Kingdom"). Most British media (except for *The Guardian*) reported in a very different way about the scandal involving the U.S. National Security Agency than did prominent newspapers of other European countries.

As far back as the Middle Ages, books and manuscripts have been burned to eliminate memory. The aim is to cause the loss of cultural memory and of the potential to remember, that is, to eschew any future memory and to foster collective amnesia. It was a proven method of silencing heretics (Werner, 1995, pp. 149–150). A milder approach to memorycide was to sequester undesirable books completely or to compile registers naming them as "errant"—"the most important instrument of censorship in the late Middle Ages" (p. 171). The Papal palace in the Vatican had its own library where the blacklisted books were deposited (p. 170). Error and its legally binding condemnation were intended to become an element of cultural memory if possible.

Manipulation of Public Attention

To function as experts of factual knowledge or conveyors of salvation and meaning, the relevant persons must have a platform granting them the spotlight and guaranteeing their presence in the media. This attention, a general term for selectivity in perception, determines what is learned and remembered and what is excluded. Because attention is an increasingly scarce resource amid the information overloads of our times (Franck, 1998), various sophisticated techniques have been developed to attract, manipulate, or divert it and to control access to the platforms that afford it. Directing the public's attention to certain objects, persons, or concerns has become a major business and a powerful device for shrewdly steering learning processes, value systems, identities, collective memories, and, yes, consumer behavior.

Most methods of manipulation help turn the public's attention and interest to particular aspects and away from others. As in a theater, the audience is to watch only those parts of the scene illuminated by the spotlights, with the other actors and events remaining in the dark. The careful choice of information and topics (agenda-setting) can manipulate the media's public without resort to distortions or lies. A conflict may end not because the problem is solved but because the public debate may have shifted to another problem.

Considering today's flood of information, the content or societal usefulness of a message is often less important for its broad diffusion than the platform on which it is presented. The locality in which new knowledge is declared mainly determines

[32] "The objective of the DA-Notice System is to prevent inadvertent public disclosure of information that would compromise UK military and intelligence operations and methods, or put at risk the safety of those involved in such operations, or lead to attacks that would damage the critical national infrastructure and/or endanger lives" (DA-Notice System, n.d., par. 1).

the relevance, visibility, and credibility of the associated knowledge claims. This ability to shift public attention to selected subjects, persons, objects, or places and to draw it away from unlit areas is one of the most effective instruments of power in the twenty-first century. However, most persons and institutions exerting this kind of power remain anonymous.[33]

Subjectivity and Credibility of Experts

Crisis of Expertise?

Beck (1986, 1992a, 1992b, 2007), Pfister and Stehr (2013), Schimank (1992), Stehr (1992), Stehr and Ericson (1992), van den Daele (1992), and many others have pointed out that knowledge societies are simultaneously also risk societies for the very reason that acceleration of social and technological change and escalation of complexity and interdependencies have made them ever more fragile and vulnerable.

> The increasing spread of knowledge in society and the attendant growth in alternatives for action produce societal uncertainty. Science cannot deliver any truths (in the sense of conclusive causal chains or universal laws) but only more or less well-founded hypotheses and probabilities. Instead of being a source of bedrock knowledge and certainty, science is thus essentially a *source of uncertainty* and sociopolitical problems. (Pfister & Stehr, 2013, p. 17)

Pfister and Stehr's (2013) arguments focus on the decay of the authority of experts, the loss of respect for the know-how embedded in public administration, and the undermining of the epistemological monopoly held by gatekeepers of the scientific disciplines (p. 16). The fragility of the knowledge society consists above all in the decision-makers' escalating dependence on outside specialists (Bauman, 1992), the subjectivity of people in the latter group, the resulting multiplicity of their differing opinions,[34] and ever-increasing disciplinary specialization, which ultimately obscures the inadvertent consequences of decisions. The current crisis of technical competence thus lies less in a scarcity of experts than in the continuing fragmentation and narrowness of what they know, overspecialization, the politicization of particular scientific domains, the conscious acquiescence of experts to the interests

[33] In most cases it is not the host of the talk-show who selects his or her guests, but anonymous members of the editorial staff of the TV channel.

[34] Baghel and Nüsser (2010) offer a striking illustration of the subjectivity of expertise: "The guidelines proposed in the World Commission on Dams (WCD) final report were vehemently rejected by several Asian governments, and dam building has continued apace in most Asian countries. This reaction is in line with the simplistic dam debate, where dam critics offer laundry lists of socioeconomic and environmental costs, and dam proponents highlight the benefits while underestimating associated costs. Whereas the WCD sought to evaluate dams in terms of 'costs and benefits', this approach is self-defeating due to the very subjectivity of such measurements" (p. 231).

of their clients, the partiality and subjectivity of some experts, the coalitions between bad science and media power, and technocratic arrogance toward critics. The following episode is a prime example of the situation.

> An erroneous prediction of the disappearance of Himalayan glaciers by 2035, took on a life of its own, being repeated periodically with greater credence, until it entered the report of the IPCC.[35] This one paragraph in a 980 page report was then used to garner public attention and support for action on climate change. As it became clear that this prediction was erroneous, and the original date had been 2350, it became sufficient to discredit the entire report of the premier body of experts on climate change. . . . The chairperson of the IPCC at first dismissed questioning of the 2035 date as "voodoo science", however as the error became clear, an apology eventually became necessary. (Baghel, 2012, p. 1)

There are various reasons why the credibility of experts today is much more contested than it was in earlier periods. Studies by some authorities have quickly proven to be wrong or useless. Others have bogusly claimed to have forecasting ability. The half-life period of technological innovations and, therefore, of specialized knowledge is steadily decreasing, leaving experts to contradict each other on many questions. They "frequently emphasize some aspects of a problem but overlook others, and . . . even if we could find the right experts, they may not have the answers" (Evans & Collins, 2008, p. 609). Some of them fail to see or acknowledge the significance of the spatial context; still others regard best practice in one place or socioeconomic setting as the single best solution, neglecting the fact that the optimal response to a problem also depends on the geographic and social framework involved. Solutions shown to be reliable or cost-effective in cities can lead to unintended, highly inimical consequences in rural areas on the periphery.

An increasingly serious problem is the "media power of bad science" (Grossarth, 2014, p. 17). In media-saturated democracy, lobby groups and politicians seek scientific knowledge that confirms their own preconceived opinions or political goals. This appetite of policy- and decision-makers is often fed by third-class scientists hoping that a big bang in the media will garner them the attention withheld from them in the scientific community. By the same token, journalists do not want to ruin a "good story" by including too much complexity, such as an analysis of the data's reliability, an exhaustive report on the statistical and methodological approach, or a detailed description of the laboratory experiments underlying a study (p. 17). In most media a good headline is more important than the methodological quality of a scientific investigation. Because of that attitude, results of a study that professional researchers have criticized or ignored as unscientific can reach millions of readers and listeners through talk shows and other forms of media. This power that bad science has in the media naturally erodes the credibility of experts in the eyes of the public.

The growing doubt about the competence of experts strengthens the position of nonexperts. This outcome may be one of several reasons for the ever greater demands of the affected population to have a say in vital decisions, especially on environmental issues and infrastructural planning. "The link between expertise and participation remains the Achilles heel in the relationship between [science and technology studies] and wider decision-making" (Evans & Collins, 2008, p. 612).

[35] Intergovernmental Panel on Climate Change.

The more expertise and scientific results are contested, the more uncertainty and risks increase (for details see Evans & Collins, 2008, p. 612). Uncertainty reinforces the need for new knowledge (Beck, 1992a, 1992b; Böhme, 1992), making this upward spiral, or the "will to knowledge" (Foucault, 1990), virtually inexorable. People never know enough. However, it is necessary to distinguish social choice (political bargaining, societal negotiations) from scientific or technical analysis. When solving a technical or scientific problem, empirical research or professional analysis cannot be replaced by political bargaining or mass participation. No social system can afford to bypass expertise or the explanatory power of science altogether, but it is possible to mobilize counterexpertise based on higher competence or new scientific results (Schimank, 1992, pp. 218–219; van den Daele, 1992, p. 336).

> Although the role of experts in risk regulation has been challenged over the last decades, the experts have survived. Issues of social choice implied in the regulation of technologies can be shifted to political processes of conflict and consensus formation. Issues of technical analysis, of prognosis and explanation cannot be shifted. They remain the domain of professional judgement. Experts may disagree, but their controversies belong, so to speak, to the profession. Outsiders can suspect that experts are biased, partial or even corrupt. But they cannot declare matters of fact to be matters of social choice. Nor can they as a rule substitute professional expertise with commonsense judgement (van den Daele, 1992, p. 337).

There are a number of crucial questions: How can we distinguish the capable (competent) expert from the nonexpert? What role does political and economic power play in defining who is a "real" expert? Which decision-making processes are a matter of social choice and political bargaining and which need scientific analysis first of all? In which domains and issues of decision-making are mass participation and citizen science[36] helpful and efficient and where are they inappropriate?[37] How and to whom is expert status attributed or denied in various societies (Evans & Collins, 2008, p. 609)? To what extent are solutions or best practices universally applicable and in which cases does site-specific or local expertise yield superior results?

Scholars as Instruments of Politics[38]

Academics, scientists, and other experts of factual knowledge serve power not only by describing situations as realistically or truthfully as possible, scientifically

[36] "Citizen science . . . is scientific research conducted, in whole or in part, by amateur or nonprofessional scientists" ("Citizen science," 2014). It has been defined as "the systematic collection and analysis of data; development of technology; testing of natural phenomena; and the dissemination of these activities by researchers on a primarily avocational basis" ("Finalizing," 2011). Citizen scientists often partner with professional scientists to achieve common goals. Large volunteer networks often allow scientists to carry out tasks that would be too expensive or time-consuming by other means.

[37] It is unlikely that laypersons are permitted to perform surgery.

[38] "In Jonathan Swift's *Gulliver's Travels*, when Lemuel Gulliver arrived in May 1707 in the land of Laputa on the continent of Balnibarbi, the king of Laputa received his guest at the royal palace. Concerned about how his power would be perceived by a foreigner, the king proudly showed Gulliver his loyal scientists, astronomers, and musicians, all of whom were dedicated to enlightened governance. Gulliver, however, was a traveler with a keen eye. He observed how

analyzing contexts, explaining interactions and interdependencies, and finding solutions to technical problems. Some of them support the power structure by pretending to provide objective or scientific arguments that justify political and military actions, by manipulating facts, or by serving their nation in military intelligence (see Heffernan, 1996, 2002), as a diplomatic weapon (Doel & Harper, 2006), or as an instrument of colonialism and imperialism. When engaging in ideological disputes, politicians and other figures in power like to turn to the academic community when seeking to create the appearance that their arguments and actions are rational, their actions legitimate, their analyses scientific, or their evaluations objective (see Gregory, 1978). Gyuris (2014) shows how Marxist thinkers frequently emphasized that their findings were "scientific," "objective," and factual (p. 115) and that they branded the ideas of their political rivals as politically biased and unscientific.

> [Lenin] contrasted "official science" (Lenin, 1964, p. 200) with the Marxist approach. In his interpretation, "official science" produced findings that contradicted empirical evidence, but still aggressively tried to destroy all competing concepts. The Marxist approach was, however, verified by "facts" in his eyes. Thus, Lenin interpreted the scientific field as being configured by the dichotomy between those having political power, and those who are right. He consequently referred to the former as "bourgeois science" or "science" in quotation marks, while about the latter he simply wrote as science, without quotation marks. For him, "bourgeois science . . . strives to obscure the essence of the matter, to hide the forest behind the trees" (p. 216). He considered this by no means as accidental since, as he put it, "bourgeois scholars . . . are all apologists of imperialism and finance capital" (p. 226). That is why "official science tried, by a conspiracy of silence, to kill the works of Marx" (p. 200). However, what Marx had written about capitalism and its tendency to end up in monopolies, "has become a fact", and "facts are stubborn things", so "they have to be reckoned with, whether we like it or not" (ibid.). It was in the light of these tendencies that Lenin judged the findings of Marx a "precise, scientific analysis" (p. 304). . . . [A]ll kinds of knowledge not based on Marxist-Leninist, or rather Stalinist, grounds were automatically exiled from the domain of science. . . . Stalin not only upgraded the already existing legitimate authority of science, but also positioned himself as the leading expert and representative of this "mode of knowledge". . . . Stalin again and again stressed the objective, scientific and unambiguous nature of his statements. Here, he claimed social laws to have the same explanatory power as natural laws. (Gyuris, 2014, pp. 116–117)

In democracies and totalitarian states alike, some scientists, experts, and legal advisors have been ready to sign a "devil's pact" (Cornwell, 2003) with those in power in order to acquire the resources and opportunities they need to accomplish their research or burnish their reputation (see Chap. 9 by Barnes in this volume; Szöllösi-Janze, 2004). In the widely known "torture memos" of 2005 and 2006, legal advisors of the Bush administration (John Yoo, Jay Bybee, and Stephen

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the netherland population of Lindalino, part of the kingdom of Laputa, dwelled below a floating island which the king could order his scientists to manipulate. The scientists could use magnetic levitation to move the floating island, thus preventing sunlight and rain from getting to the population of Lindalino. If insurrection broke out, the sovereign could demand that Lindalino be bombarded with rocks, or destroy Lindalino by lowering the floating island on top of the population" (Seegel, 2012, p. 1).

Bradbury) redefined torture and argued that torturers acting under presidential orders could not be prosecuted (Head, n.d., par. 2 & 5; "U.N. says," 2008, par. 1).

Another variety of courtship between the intelligentsia and the power structure was apparent in the way scholars celebrated communist leaders as scientific geniuses.

> [Stalin's] scientific "genius" was frequently praised by leading members of the scientific hierarchy. For instance, the then President of the Academy, Sergey Vavilov, otherwise an internationally acknowledged physicist, often referred to Stalin as "the genius of science" (Vavilov, 1950[1949], p. 11) or "the coryphaeus of science" (Pollock, 2006, p. 1). (Gyuris, 2014, p. 117)

There are also numerous historical instances of scientists' involvement in forgeries in order to please someone in power. They have produced data, images, and arguments utterly divorced from reality solely to realize political goals or pursue the interests of their government leaders. It is well known that maps, for example, have figured as important tools of politics, nationalism, colonialism, and imperialism (Black, 1997; Cosgrove & della Dora, 2005; Heffernan, 1996, 2002; Seegel, 2012; Stone, 1988; Wilkinson, 1951). "[C]artography was a means of control used by governments to conquer and then engineer territorial space. Cartography was a representational language of power and protest . . . [and] a tool of imperial governance" (Seegel, 2012, p. 2). Maps have been used "as a geopolitical artefact; as an image of political space, both actual and potential, and as a military and strategic device that both reflected and challenged the objectives of the major nation-states" (Heffernan, 2002, p. 207; for further details see Seegel, 2012; Wilkinson, 1951).

After World War I, for instance, geographers in several countries turned to the problem of "just" or "natural" borders and provided "scientific" arguments for corrections in territorial boundaries. For the peace negotiations culminating in the Treaty of Trianon, the French geographer Emmanuel de Martonne (1973–1955)[39] submitted a largely faked ethnographic map entitled "Distribution of nationalities in regions dominated by Romanians"–published in 1919 by the Service Géographique de l'Armée–that blithely ignored official data from several national censuses.[40] De Martonne's cartographic manipulations and distortions of information were documented in detail by Boulineau (2001), Bowd (2011), Palsky (2002), and others. Presented as objective and authentic facts, of course, these manipulations were used to justify the decisions of the Allies to attach large parts of Hungary to Romania at the peace negotiations of Trianon. Such subterfuge and methodological manipulations of ethnic maps had started in Romania already in the 1890s. Twenty-nine of

[39] During the Paris Peace Conference after World War I, de Martonne was an adviser to French Minister of Foreign Affairs André Tardieu and French Prime Minister Georges Clemenceau.

[40] He declared national census data on the mother tongue of the Romanian population as unreliable and "corrected" them by data about the religious denomination of the population. In addition he applied a number of cartographic techniques and tricks that masked the real distribution of minorities. The census data on the mother tongue of the population in Transylvania are still retrievable at http://www.kia.hu/konyvtar/erdely/erd2002.htm. Kocsis (1994, 2007), Kocsis and Kocsisné (1998), and others describe the distribution of minorities that is based on mother tongue and the background of the ethnic conflicts in the Carpathian Basin. Jordan (2010) gives a general overview about methods used to manipulate maps showing the distribution of ethnic awareness.

the most impertinent manipulations of maps and atlases published between 1894 and 1941 in Romania have been documented in detail by Staatswissenschaftliches Institut (1942) in Budapest.

For the peace negotiations in St. Germain, the Italian geographer and philologist Ettore Tolomei (1865–1952)–later a politician and member of the Fascist party–produced a map of South Tyrol in which all German names of places, rivers, mountains, and landscapes had been replaced with Italian names, although more than 95 % of the population there was German-speaking at that time. Tolomei made a few embarrassing mistakes in his map because he did not know what some of the German terms meant, or he translated them incorrectly. This map was meant to justify the fact that South Tyrol had been annexed by Italy after World War I. The American geographer Isaiah Bowman, who was also involved in the peace negotiations, described the situation as follows:

> Each one of the Central European nationalities had its own bagful of statistical and cartographical tricks. When statistics failed, use was made of maps in color. It would take a huge monograph to contain an analysis of all the types of map forgeries that the war and the peace conference called forth. A new instrument was discovered—the map language. A map was as good as a brilliant poster, and just being a map made it respectable, authentic. A perverted map was a life-belt to many a foundering argument. It was in the Balkans that the use of this process reached its most brilliant climax. (Bowman, 1921, p. 142)

It turned out that assessment criteria or scientific rationales for corrections of borders were randomly interchanged at the peace negotiations after World War I. In South Tyrol the watershed was regarded by the victorious powers as a legitimate or "natural" border, but they rejected the watershed concept in Istria and the Carpathian Basin. The victorious powers considered rivers to be ideal, natural boundaries when it suited them; in other cases, rivers were called a connective element that united rather than separated regions.

Academics (e.g., historians, geographers, literary scholars, archeologists, and anthropologists) interacting with museums and producing school textbooks have also advanced the nation-building process and the objectives of their respective national policies by espousing the interpretations and views of history taken by their governments or by rewriting the history of a region's settlement. To claim the right to rule or to justify wars, "experts" have even been commissioned to forge documents[41] or corroborating evidence (as with the alleged weapons of mass destruction in Iraq).

[41] To aggrandize the legitimacy and influence of the House of Habsburg and its Austrian lands, Rudolph IV (1339–1365) ordered the creation of a forged document called the Privilegium Majus ("the greater privilege") in the winter of 1358–1359. It consisted of five faked deeds, some of which had supposedly been issued by Julius Caesar and Nero to the historic Roman province called *regnum Noricum*, whose borders ran a course similar to those of modern Austria. The Privilegium Majus was modeled on the Privilegium Minus (a grant of special privileges and a reduction of obligations toward the empire, issued by Holy Roman Emperor Frederick I Barbarossa when Austria was raised to a duchy). The original of the latter document, however, "got lost" at the same time, and the Privilegium Majus was identified as a fake even by contemporaries, such as the Italian scholar Francesco Petrarch.

Conclusion

This chapter explains why human action is a blend of factual and orientation knowledge and why both categories of knowledge are needed for the acquisition and retention of power. The art of exercising power appears to lie in finding the right balance between the two epistemological categories for each task, situation, and set of competitive conditions.

The distinction between factual knowledge and orientation knowledge, however, is not just academic; it has great existential significance for goal-oriented, social systems. For if orientation knowledge is so dominant that it impairs the decision-maker's perception and faculty of judgment, or if orientation knowledge is applied where factual knowledge is primarily needed, the eventual result is faulty analyses, wrong objectives, and decisions that impair the performance and viability of the social system involved. Orientation knowledge can instill tremendous motivation and strengthen a social system's cohesion, but in its exaggerated form as religious fundamentalism and political fanaticism it restricts the ability to judge a situation impartially and realistically, to foresee unintended long-term consequences of actions, to distinguish between representation and reality, and to make the right decisions for accomplishing objectives. Many policy-makers and business leaders have failed to reach their goals because they believed in their own propaganda, which was originally intended only to keep their system intact and had no claim to truth.

Self-reflection, necessary corrections, processes of learning and adaptation, and continued dynamic development of organizations can take place only if uncomfortable information is not repressed and if public discourse avoids preference falsification.[42] The people holding political power or controlling the media must desist from trying to thwart public expression of views that do not conform to political correctness or the opinions of the "intellectual theocratic caste" (Schelsky, 1975). Self-censorship and preference falsification have a number of adverse impacts on the social system or society in question. According to Kuran (1995):

> [P]reference falsification generates inefficiencies, breeds ignorance and confusion, and conceals social possibilities. (p. 6)
>
> [In communist systems] individuals routinely applauded speakers they disliked, joined organizations whose mission they opposed, ostracized dissidents they admired, and followed orders they considered nonsensical, unjust, or inhuman. (p. 119)
>
> [T]he distortion of public discourse paralyzed the critical faculties of individual citizens, making them accept lies as unquestionable truths and hollow slogans as profound wisdom. (p. 206)

The relations between knowledge, power, and space are pivotal in myriad issues and theoretical approaches. However, as meritorious as it may be to interpret Arendt, Chomsky, Gramsci, and Foucault repeatedly from new angles and to discuss minute details of hegemonic practices, surveillance, and governmentality, these discourses cover only a fraction of the total complex known as the relations between power,

[42] Kuran (1995) takes preference falsification to mean "the act of misrepresenting one's genuine wants under perceived social pressure" (p. 3).

knowledge, and space. Further research should direct attention to at least four issues. First, it is necessary to increase the integration of the findings of communication and organization theory, management studies, social psychology, network studies, political geography, and other fields focusing on the role of power in the task of organizing social systems in space. Organization studies in the tradition of Mintzberg (1979) have much to offer when the spatial distribution of power and knowledge has to be explained, for they focus on the relations between the stability (or instability) of an organization's tasks, the organization's environmental uncertainties, its autonomy, and its internal structure (architecture).[43] If organizations are dealing with simple tasks and a stable environment (low degree of uncertainty), then decision-making, problem-solving, research, development, and planning will shift to the upper levels (the center) of the system's hierarchy. Consequently, the lower levels will predominantly keep routine activities and workplaces for the low-skilled person. This type of organization can be called *bureaucratic*. If organizations are dealing with complex tasks and a dynamic environment (high degree of uncertainty) and are confronted by constantly changing, unpredictable, one-time transactions, then decentralization of competence and authority within the system is more effective. This type of organization is called *organic* (for details see Mintzberg, 1979, pp. 86–87; 188–202; 271–273; Meusburger, 1998, pp. 131–152).

The second issue that has been widely disregarded in studies about the interplay between power and knowledge is the role of secrecy, disinformation, leaks, camouflage, and deception. Having exclusive knowledge, disclosing secrets of adversaries in due time, keeping essential information secret as long as necessary, manipulating information, and dominating media are among the most important instruments of power. Some authors have observed that the state exercises power, among other things, by conducting censuses or introducing land registers and personal registration (Hannah, 1997, 2000). Conversely, the public can be duped and manipulated if a government does not gather or share particular data that would damage its image or if it switches to publishing that information only in an aggregate form that henceforth obscures social or regional disparities.[44]

A third topic worthy of more research attention than it has hitherto received is the sociospatial implications of surveillance. Boyne (2000), Deleuze (1992), Klauser (2009, 2013, 2014), Lyon (2001, 2003), Murakami Wood (2007), and others argue that the information society is also a control or surveillance society. Examples of such work are the studies by Klauser, who analyzes the importance of space as the locus, object, and tool of surveillance; the relationship between space and surveillance in different institutional contexts (cities, airports, major sports events); and the

[43] The architecture of an organization is defined as an ordered arrangement of different functions (workplaces with different tasks). It can be described by the hierarchical arrangement of units fulfilling line and staff functions; by the distribution of expertise, responsibilities, and control functions; by the centralization or decentralization of decision-making; by the channels of formal communication; and many other attributes (Meusburger, 2007b, p. 119).

[44] Poverty, crime, income inequalities, and gender inequalities purportedly did not exist in communist countries. The relevant data were not collected or not published (Meusburger, 1997).

logics, functioning, and effects of control and regulation in particular geographical locales. What effects do the Internet and the new social media have on processes of wielding power, on grass-root participation in policy decisions, and on resistance to political propaganda? To what extent are the new technological possibilities for the surveillance of digital communication by secret services changing the national and global asymmetries of power and the definition of privacy?

A fourth engaging field of research relates to the question of the spatial scale—the global, national, regional, or local—at which solutions to salient problems tend to emerge and where expertise and power will have to be wielded. How much power has the nation-state surrendered to regions, corporations, and the financial sector? How much will it have to surrender in the future?

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