The Bildung Rose

An Educational Framework for Grasping Complexity

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ABSTRACT: *The world is becoming more complex and local decisions may have global impact. To grasp these complexities, education must provide the ability to see the full picture, to approach decision making and professional as well as individual choices from several perspectives, and it must promote the development of the moral courage to think and act according to personal conscience. Bildung can be defined as the combination of knowledge about the world and the emotional and moral to engage and take responsibility. The Bildung Rose is a heuristic model that depicts society as consisting of seven domains: Production, Technology, Aesthetics, Power, Science, Narrative, and Ethics. The purpose of this article is to introduce the Bildung Rose as a tool for addressing, grasping, and taking responsibility for society. Bildung is the combination of education and moral and emotional development; the cultivation and development of personal character, autonomy, and sense of responsibility. In order to thrive in one's society, to be an active and engaged citizen, and to see society from a system's perspective, one needs to understand some of all seven domains; deep knowledge in one domain is professionally crucial, but the complexity of the world and of most jobs demands that individuals can contextualize decision making into a wider societal context. This article presents the Bildung Rose, explores the universality of the model, and suggests how it can be practically applied both at the macro level when designing educational systems and organizations, at the meso level when developing programs, and at the micro level when educating or making decisions. The model as of yet is a sketch and a heuristic model that requires further examinations and exploration.*

KEYWORDS: *Bildung; autonomy; ethics; complexity; leadership*

We are all facing increasing levels of complexity in almost all aspects of our lives, which accordingly makes decision making more intricate and this can feel overwhelming. We cannot make the complexity go away, but we can become better at breaking down complex issues into parts that we can grasp; we can become better at seeing the full picture, discern the parts, and understand their interrelatedness. The Bildung Rose is a model that defines and describes societies as consisting of seven domains: Production, Technology, Aesthetics, Power, Science (or at least knowledge in the scientific sense), Narrative, and Ethics (Andersen, 2019). Like other models, it is a simplification; it is an analytical tool, a way to take a snapshot of the current situation as well as a normative model for exploring whether the seven domains are

properly balanced in reality. The reason it is not called "The Society Rose" is that for the individual to thrive in their society, they need to have a certain level of understanding of all seven domains; the inner world must match the outer world, so to speak. Thereby, the Bildung Rose also becomes a normative tool for education: How to make sure that all children and youth learn about and understand all seven domains well enough to be able to engage as informed citizens as adults? How do they get enough allround bildung, *allgemeinbildung*, to make informed decisions, find a job or run a business, and find life and society meaningful and a place where they belong and can contribute and engage on equal terms with everybody else? The Bildung Rose is not only applicable to the larger society, it also works on organizations such as companies and it can help decision makers such as politicians and CEOs see the bigger picture and the wider potential implications of their decisions. The Bildung Rose can be an analytical as well as a planning and leadership tool for wiser, deeper, and more sustainable decision making. The purpose of this article is to introduce the model as a concept and to invite further examination.

What is Bildung?

Before we start exploring the Bildung Rose, let me introduce bildung as a concept. There is no translation in English translation for it in English, though formation and self-cultivation come close. Usually, the word bildung is used also in English (incl. in the word bildungsroman).

The word is German and bildung refers to *Bild*, image. In the 1600s, this *Bild* was the image of God or Christ in which the individual would shape him- or herself; in the 1700s, the concept of bildung was secularized and changed, and the *Bild* became the self-image, the personal cultivation into one's full and true personality (Schaarschmidt, 1931/1965).[1] Laying the foundation for this was Johan Amos Comenius (1592-1670), and among the prominent bildung thinkers who developed the modern understanding of bildung were Johann Gottfried Herder[2] (1744-1803), Friedrich Schiller[3] (1759-1805), Johann Heinrich Pestalozzi[4] (1745-1827) – who besides writing extensively on the topic experimented with children's education – Johann Gottlieb Fichte (1762-1814), and Wilhelm von Humboldt[5] (1767-1835) – who also made bildung an essential part of the modern university (the university he founded in Berlin and elsewhere) (Andersen & Björkman, 2017).

Several people have come up with definitions of bildung since then. In the Global Bildung Network and according to the Global Bildung Manifesto, bildung is defined as follows:[6]

> Bildung is the combination of the education and knowledge necessary to thrive in one's society, and the moral and emotional maturity to be both a team player and have personal autonomy.

> Bildung is also the 'education' bringing this about; Bildung is the process as well as the result.

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[1] Schaarschmidt, Ilse: Der Bedeutungswandel der Worte "bilden" und "Bildung" in der Literaturepoche von Gottsched bis Herder, in: Beiträge zur Geschichte des Bildungsbegriffs, (as reproduced in Beitrage zur Geschichte des Bildungsbegriffs, Verlag Julius Beltz, 1965)

[2] Herder, Johann Gottfried: Auch eine Philosophie der Geschichte zur Bildung der Menschheit (1774)

[3] Schiller, Friedrich: Über die ästhetische Erziehung des Menschen (1793-95)

[4] Brühlmeier, Arthur: J.H. Pestalozzi – Auswahlt aus seinen Schriften Vol. 1-3 (Uni Taschenbücher, 1979)

[5] Bruford, W.H.: The German Tradition of Self-Cultivation – 'Bildung' from Humboldt to Thomas Mann (Cambridge University Press, 1975)

[6] See https://www.globalbildung.net/manifesto/

Bildung is a dynamic concept, one that can evolve.

Bildung is knowing one's roots and being able to imagine and co-create the future.

Bildung offers wholesomeness. It is a means in itself; it is not instrumental. It allows us to be fully humane and treat the planet and other species with their inherent dignity, thus enabling us to live within planetary boundaries.

Bildung is a promise of an achievable utopia towards which everybody can contribute.

Bildung is a force of peaceful societal transformation.

Another way of describing bildung is that it is the combination of two different kinds of knowledge (Andersen, 2021):

- **Easily transferable knowledge**, i.e. what you can teach others, and you can check if the knowledge was transferred by testing; either by formalized written or multiple-choice tests or less formalized by asking in conversation. This kind of knowledge transfer is probably what most people think of when they think of education, and many probably also generally think of it as classroom, academic teaching, but this kind of transfer takes place in several contexts and regards very different kinds of content:
    - **Academic examples**: math, science, biology, physics, languages, history, social sciences, geography, etc.
    - **Non-academic examples**: stories, the traffic rules, what kind of pictures not to share on social media, moral norms, songs, etc.
    - **Practical knowledge that needs to be trained**: various crafts, how to bake a bread, cook a meal, fix a bicycle, how to swim etc.
- **Knowledge that can hardly be transferred at all**, i.e. emotional and moral development, the knowledge that comes from life and from making mistakes, from facing obstacles and pushbacks, and from succeeding. Few people think of this aspect of learning and education, but it is not less crucial than the transferrable knowledge, and it is what Herder, Schiller, Pestalozzi, Fichte, and von Humboldt meant when they wrote about bildung. (Andersen & Björkman, 2017)
    - **Examples of emotional and moral development from child to adult**: being able to contain emotions and not throw tantrums, to play according to rules and to handle losing a game, being able to wait in line for your turn, being able to take criticism and handle disappointments, handling heartbreak, taking re-sponsibility for a partnership, a work relationship, a friendship, playing by the rules also when nobody is watching, keeping promises, etc.

We can easily transfer knowledge *about* this kind of emotional development, talk the talk, so to speak, but the non-transferable knowledge itself must come from life-experience. Actually developing the emotional and moral capacity to happily take your place in the line and not jump it, or to sense the moods of your colleagues and solve a conflict, takes emotional devel-opment that comes from life; this development cannot be transferred directly. We can tell children and peers how we expect them to behave, and we can let them know how we feel if they let us down and do not live up to the emotional and moral development we expect from them, but one cannot transfer one's knowledge of heartbreak or the ability to handle disap-pointments to anybody else.

Through the arts, though, i.e. through aesthetics, good artists can evoke emotions in others that can, to some extent, make us feel what other people feel, and through this emotional

experience, we can learn and we can develop emotionally and morally, but only indirectly, and there is no way to check if the recipient gets the "right" emotions out of it. We cannot test people's morality by asking them or testing them in a written test; only when life throws moral challenges at us does our true moral and emotional development show.

We can think of the easily transferable knowledge as knowledge that expands our horizon, and we can thus think of it as horizontal knowledge and development; the almost-impossible-to-transfer knowledge is about our emotional depth and moral aspirations, and we can thus think of it as vertical knowledge and development. (Andersen, 2021) Figuratively, this gives us a horizontal plane or a landscape of transferable knowledge, while the non-transferable knowledge is that which "sinks in" or roots us, deepens us, or that which makes us aim high. Figuratively speaking, our inner world can be broadened, deepened and lifte or brought up—to play on the word "upbringing."

Emotional and moral development

The emotional and moral development that is the non-transferable part of bildung is today mostly explored in developmental psychology. As shown in *The Nordic Secret* (Andersen & Björkman, 2017), the bildung described by Herder, Schiller, Pestalozzi, von Humboldt etc. in the decadesd around 1800 to a large extent overlaps with what modern developmental psychology calls emotional and moral or ego-development. One main difference between bildung philosophy and developmental psychology is the significance of culture in bildung, an aspect of human life and mind that developmental psychology does not address. Among the most prominent developmental psychologists are Jean Piaget (1896-1980), Lawrence Kohlberg (1927-1987), and Robert Kegan (1946-), all of whom describe our psychological development in phases.

Piaget explored how children go through different phases of cognitive and emotional development until early adulthood, and biological development plays a significant role; the mind only becomes ready for certain types of learning and cognitive activity as the brain grows. Central to Piaget's developmental psychology is also that the child's mind evolves through an ongoing process of *assimilation* and *accommodation* of so-called *schemata*, i.e. mental models of the world. When a child encounters a new event that is consistent with an existing schema, the schema is confirmed and there is assimilation. But when a child encounters a new event that is not consistent with an existing schema, the child must either modify this faulty model of the world or form an entirely new one. In other words: we evolve through pushbacks. According to Piaget (Piaget, 1969), the child develops through these major phases, each of them with sub-phases (my condensation of his theory):

- **The sensorimotor period** from birth to 2 years of age.
- **The pre-operational stage** from 2 years of age when the child begins to speak until around age 7.
- **The concrete operational stage** from 7 to 11 years of age.
- **The formal operational stage** from around age 11 to early adulthood, age 15-20.

Our emotional and moral development does not end with childhood; we continue developing emotionally and morally through life as we keep learning and keep facing pushbacks.

Kohlberg describes three levels of moral development, each in two stages:[7]

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[7]   See https://www.britannica.com/science/Lawrence-Kohlbergs-stages-of-moral-development

1. Pre-conventional Level
    a. The first moral stage is oriented towards obedience and avoiding punishment: Will I get caught?
    b. The second is instrumental and oriented towards self-interest: Does this serve me?
2. Conventional Level
    a. The third stage is oriented towards interpersonal relations and conformity: Will they like me and trust me?
    b. The fourth is oriented towards authority and maintaining social order: Will this serve societal structures?
3. Post-conventional or Principelled Level
    a. The fifth stage is oriented towards the social contract in general: Does this serve everybody and the bigger picture?
    b. The sixth is towards universal ethical principles: Does this serve a purpose beyond our own time?

Kegan describes five phases of mental complexity (Kegan, 1994) (my condensation of his theory):

- Early childhood; age 2-6
- Late childhood; age 6-12
- Socialized mind; teenage years and onwards
- Self-authoring mind; adulthood
- Self-transforming mind

In a bildung context, this is interesting because the psychological development described above comes extremely close to the original 18th Century understanding of bildung. Friedrich Schiller, for instance, describes three kinds of people, each defined by a phase of bildung, and a transitional phase between them (Schiller, 1795) (my condensation, quoted from Andersen, 2021):

- **The physical, emotional person**, who is in the throes of his emotions and cannot transcend them, and therefore he is not free.
    - To transcend our emotions, we need calming beauty, aesthetics that can align our emotions with the norms of society; we can then transform and become:
- **The person of reason**, who has aligned himself with the moral norms of society and has made the norms his own; this person cannot transcend those norms and expectations, though, and therefore he is not free either.
    - To transcend the norms, we need invigorating beauty, aesthetics that can shake us up and wake us up, and make us feel our emotions again, which allows us to transcend the expectations of others and become:
- **The free, moral person**, who can feel both his own emotions regarding right and wrong and what is right and wrong according to the shared moral norms; because this person has transcended both his own emotions and the expectations of others, he can now think for himself and is therefore free.

These four understandings of our emotional and moral development match as follows (my condensation):

Schiller	Piaget	Kohlberg	Kegan
	Sensimotor period Pre-operational stage	Pre-conventional	Early childhood
Physical person	Operational stage	Pre-conventional	Late childhood
Person of reason	Formal operational stage	Conventional	Self-governing
Free, moral person		Post-conventional	Self-authoring
		Post-conventional	Self-governing

Particularly two things separate Schiller's thinking from that of the three psychologists: He suggests that we can acquire this emotional and moral development through aesthetics, i.e. the arts, and his purpose for writing about bildung was to discuss who can handle political freedom. According to Schiller, only the free, moral person has the emotional autonomy and moral backbone to freely make up his mind and thus to engage politically as a citizen.

As mentioned above, Piaget talked about assimilation and accommodation of schemata made the child's mind evolve. Fichte wrote about pushbacks (Anstoss) that made the self re-alize itself; if nothing "offended" the self, there would be no friction with the world and the self would not develop (Fichte 1794). Fichte and Piaget describe the same phenomenon: we grow from having to reconfigure our understanding.

Introducing the Bildung Rose

The Bildung Rose (Andersen, 2019) is a heuristic model that describes society as seven do-mains and it thereby illustrates seven domains we need to know about in order to thrive; it represents the horizontal plane of knowledge, that which can be easily transferred and what we can refer to in a professional context as skills: Everybody needs to know about each domain and the best primary and secondary schools therefore teach all of them; the professional needs to be able to produce in at least one of them and tertiary schools thus generally focuses on one only.
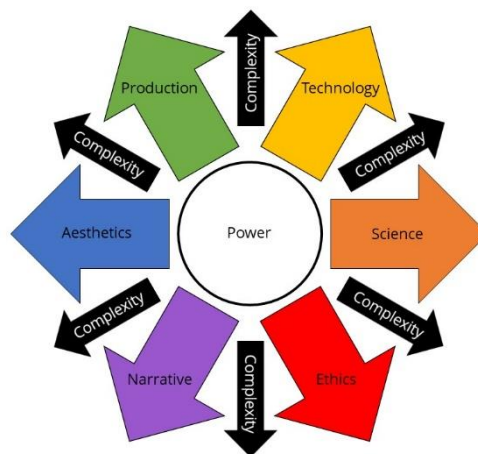

Figure 1: The Bildung Rose

- **Production**; we need food, clothes, shelter, and energy, and production of these must match the needs of the people in a society (and production for exports can pay for imports). Trades, economics, business, marketing, finance, banking, engineering,

truck driving, salesmanship, and services are among the knowledge and skills taught for this domain today.

- **Technology**; we need technology to produce food, clothes, and shelter, but technology is used in all domains. Engineering and programming are among the skills taught for this domain today.
- **Aesthetics**; beauty is a fundamental human need, we want to be beautiful in the eyes of others, and we strive to beautify our surroundings and to provide our experiences of transcendence with the most magnificent and beautiful buildings possible. We are a species of cathedral builders; we long for transcendence and beauty, and we long for creating the symbols that allow us to communicate beyond spoken or written language. Painting, sculpting, designing, playing an instrument, singing, composing, writing, and dancing are among the skills taught for this domain today.
- **Power**; all societies have some institution or institutions of power. From the shaman of the hunter-gatherer tribe to the parliament and other institutions of power of a modern nation-state, such as police, courts, and military. Law, macro-economics, policing, and political science are among the skills and topics taught for this domain today.
- **Science**; we need fact-based knowledge to survive, and though all societies do not have science in the form of peer-reviewed, systematic production of new knowledge, all societies have concrete knowledge that matches facts. Scientific method and how to gather and produce new knowledge about all domains and nature are taught for this domain today.
- **Narrative**; we tell stories in order to explore and pass on our moral values and to find out who we are, and along with shared stories come whole packages of references, expectations, values, and moral norms that allow us to communicate more than just the words said. Among the shared narratives are fairytales, mythology, religion, political ideology, history in the scientific sense, and archetypical stories such as the one behind James Bond. Our moral values are embedded in our narratives. Theology, movie making, and Marxism are among the topics and skills taught for this domain today.
- **Ethics**; the principles behind our moral values. The way that the Bildung Rose distinguishes between morals and ethics is that morals can guide us in familiar situations, ethics can guide us in unfamiliar situations. Philosophy and critical thinking are among the topics and skills taught for this domain today.

All functioning societies have those seven domains in one form or the other, otherwise, they would not last, and in order for societies to fully thrive, the domains need to be balanced and have equal value and influence. As societies grow in size and complexity, so do the domains. As the domains grow in complexity, so does the education needed in order to understand them and to work as a professional in one or more of them.

One way of describing history and the development of civilization is that as societies grew, each domain is specialized and pulled away from the other domains, insofar each domain develops its own expertise and experts. In the hunter-gatherer society, everybody knew and had skills for some of everything; there were shamans who kept many of the secrets passed down through the generations, so there was a level of specialization, but factual knowledge about nature would be embedded in narrative, and aesthetics, say, singing would be applied before, say, going hunting. In the bronze-age ringwalled city, production specialized into several crafts, and a priesthood defined much of the narratives that held societies together. With the

Renaissance, Aesthetics and Science detached themselves from religion, i.e. Narrative, and with the Enlightenment, Power detached itself from religion as well. There is an interplay between increasing numbers of people in a society and the need for increased production and specialization in order to create higher yields, and there are also enough people for specialization to be feasible. The size of society, i.e. the number of people that need food and shelter and meaningful lives, influences what each of the domains has to deliver in order for society to thrive and develop peacefully and organically with an increasing population while keeping violence at a minimum.

As societies, and thus the domains, increased their complexity through history, the demand for horizontal transfer of knowledge has increased accordingly. In the pre-modern society, most people could learn before the age of 12 or 14 what they needed in order to function as an adult, and besides the onset of puberty, that age is therefore the reason for traditional rites of passage into adulthood. In the early modern societies, 7 years of primary school became the basic education for everybody, today it is generally 12 years of primary and secondary school, with most people completing a trade or tertiary education. We are heading towards a future, where 15 years of education may be the basic minimum, and 30 years in total through life will be standard. But we also need to make education more all-round and complex in itself, and here the Bildung Rose may be one tool that allows us to design sufficiently complex education. The model is a way to achieve a systems perspective on society and thereby on the domain in which one might work and perhaps even be an expert, and how this relates to other professional fields.

From an educational point of view, the Bildung Rose is thus very much about the transferable kind of knowledge and skills, but not only. In order for a skill to actually become a skill for the individual, it must be trained, and one must struggle with it until one masters it. From ignorance via learning, reproducing, and improving knowledge to the point where one can integrate several domains and aspects of life, what can be called wisdom. One way of describing that process is Bloom's Taxonomy,[8] but it does not fully grasp the development of personal consciousness, conscience, empowerment, decision making, and character that are crucial parts of bildung. The way that we struggle as we learn shapes our character, and this is also bildung. Particularly the three domains of Aesthetics, Narrative, and Ethics can only be fully taught if we also allow ourselves and our worldview to be challenged and shaped by the aesthetics, the narratives, and the ethical principles behind our moral values. In order to grow, in order for education to be bildung, we need pushbacks and we need to be faced with information and situations that challenge our worldview.

The Ontological Status of The Bildung Rose

The Bildung Rose has taken several years to develop[9] and there are still new aspects showing up as it is explored, applied, and discussed; the most important ones are elaborated on below. It is obviously an illustration, but what "ontological" status does that illustration have: Is it a happenstance graphic representation of 7 chunks of society, or does it capture actual movements and interactions of structures, institutions, and fields of knowledge among humans in societies? One way of describing each domain is that they are epistemologies with difrerent vocabularies, values, truths, and sub-cultures.

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8   See https://www.britannica.com/topic/Blooms-taxonomy

9   An early version first appeared in my book *Baade-Og, Onsdag* in 2007 (in Danish); more about the development of the Bildung Rose below.

This paper is an invitation to contribute to a clarification of the relation between the real world and the Bildung Rose. Among the real world and model overlaps that need clarification—and a method for clarification—is to which domain concrete activities and/or professions belong: Does a carpenter on a movie set work in Production, Aesthetics, or Narrative, for instance, or is medicine a part of Production, Technology, or Science?

As a practical analytical tool it has proven very useful: It allows people to quickly spot and express what is missing from a project or an entire institution, there is something intuitively right about the Bildung Rose that spontaneously appeals to people, but no systematic testing of the model and comparison to other models has taken place yet. This paper is therefore also an invitation to testing the Bildung Rose on reality and real-life questions and problems.

Where to Apply the Bildung Rose

The Bildung Rose can be used as a way to design education so that all pupils and students of all age groups become well versed in all domains. It may also be used as a prism whenever one looks at a society, a municipality, a local community, or a workplace, be it a commercial company, a university, or any other place where people need to live and/or collaborate: Have we made conscious choices regarding all seven domains in the way that we work?

How the Seven Domains Relate to Each Other

The organization of the six petals around the Power domain illustrates neighboring similarities and shared epistemologies as well as how epistemological and other differences increase with distance in the Rose.

For instance, Production collaborates well with both Aesthetics and Technology. Between Production and Aesthetics are two entire professional fields in the modern society: industrial design and marketing; consumers love beautiful products and aesthetics is used to sell more of everything. Production is also constantly using Technology to increase production and productivity.

Only within the past generation has Production started seriously considering story telling, Narrative, as part of their toolbox, and though the most techno-

Figure 2: Relationships among Domains in the Bildung Rose

logically advanced production relies heavily on Science, there is rarely in Production an appreciation of Scientific inquiry just for the sake of knowing more about the world.

Ethics, in most places, is an entirely new field with which to engage for decision makers in Production and for many years, Ethics was explicitly not considered an issue for Production: "The business of business is business," as Milton Friedman (in)famously expressed it.

Across the Bildung Rose, neighboring domains easily collaborate, the further they are apart, the harder it is to understand the other domains unless one makes an effort and studies them and their epistemology.

Each Domains Represents a Kind of Truth or Ethic of its own

What makes the domains specialize and drift apart as society becomes more complex is, at the most fundamental level, different raison d'etres, or what could even be called different Truths or ethics:
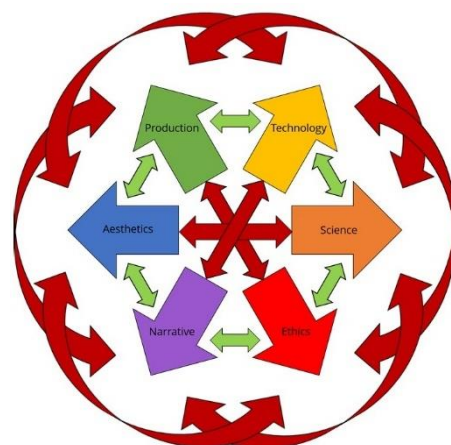
The Bildung Rose
Futures of Education, Culture & Nature – Learning to Become

- **Production**: produce more of everything, better and make more money.
- **Technology**: make things easier, faster, safer, smarter, and/or more efficient.
- **Aesthetics**: represent in symbolic form this experience or these emotions that language cannot grasp and expand our shared understanding of how things can also be; allow us to see things that do not yet exist.
- **Power**: keep societal calm and prepare for the future, create the societal scaffolding for good and meaningful lives in the future.
- **Science**: understand how this happens or exists, allow us to see more in the existing world.
- **Narrative**: explain why this happens or exists; put knowledge and symbols together so that the world makes sense and in order for us to share with each other our moral values so that we know what is good or bad.
- **Ethics**: allow us to explore what is good or bad, right or wrong, whenever we face situations we have not faced before.

Because of these differences in raison d'etres, truths or domain specific ethics, if one only knows the truths of one's own domain, the furthest away domain may seem like "They do not understand anything!". The tech engineer may find the priests ridiculous, and the scientist may think that the subjectivity of the artist produces no relevant knowledge; it is rarely this bad at the personal level, but the institutions of each domain rarely have the capacity to embrace the truths of the domains furthest away.

Some of it all in all domains

As complexity grows, each domain develops its own sub-domains reflecting the full Bildung Rose; with complexity, society as well as the Bildung Rose become fractal.

If we take the sub-system of technology as an example, it may look like this (Andersen, 2019):

Figure 3: The Bildung Rose with Sub-Domains

- **Tech-sub production:** Production of new technologies of production, i.e. industry robots.
- **Tech-sub technology**: The invention of new technologies overall.
- **Tech-sub aesthetics**: How can we design apps so that people cannot resist clicking on them?
- **Tech-sub power**: What serves the creation of new technologies the most?
- **Tech-sub science**: Pesearch into physics and math that may allow entirely new ideas and technologies.
- **Tech-sub narrative**: Technology will solve our problems and the Singularity is embedded in evolution; as we reach the Singularity, we will be fulfilling our destiny.
- **Tech-sub ethics**: "Information wants to be free."
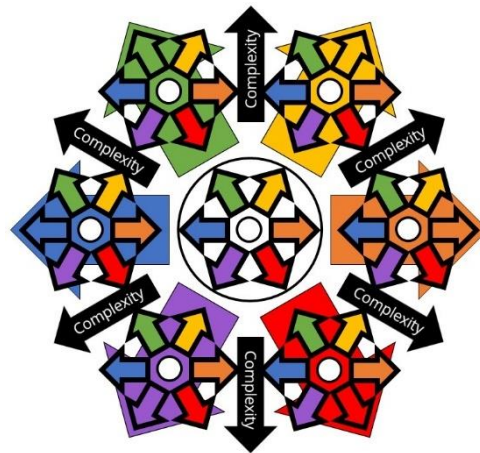
Societies out of Balance

It is crucial to all societies that all domains thrive and that they are in balance, and this balance is one of the jobs of Power. Good leadership in any society or community is to make sure that one or two domains do not get to define everything. If one or two domains take over, the other domains will suffer and so will people. We need all seven domains in order to thrive, and we need influence on all of them and we need to express ourselves in and through all of them.

In the traditional society, it was and still is typically Narrative in the form religion that gets to define everything; morality is strict, and everybody needs to comply. As Technology evolves, however, Narrative must follow suit—preferably peacefully by consulting Ethics to find out how people can best be safe around the new inventions, but frequently through conflicts and wars. With the invention of social media, our moral norms of one generation ago no longer suffice when pictures and words can travel around the globe in seconds, but this situation is not fundamentally different from the new situation in which people found themselves 500 years ago, when Gutenberg invented the printing press with moveable type: Narrative had to be updated along with the new opportunities for dissemination of information. Back then, the new invention lead to the Reformation—and then Europe faced the 100-Year War, the 30-Year War, and the which hunts until the existing Power structures gave in and allowed for multiple Narratives: religious freedom at the collective level; Europe was split into Catholic and Protestant areas. Out of this diversity of Narrative later emerged the Enlightenment, and all domains reached a new level of complexity. Until all domains were somehow adjusted to each other, immense amounts of violence were used to keep the old Narrative and Power in place. Likewise, in theocratic societies today, where cellphones and the internet challenge the monopoly on Narrative, the political Power must use immense amounts of violence—or threats of violence—to keep social calm if they do not want there to be more than one Narrative.

In the modern and postmodern society, Production and Technology have more or less been handed the power, as Power let market forces decide almost everything. Not only is money created in the domains of Production and Technology; that is, in banks and as crypto currencies. Production and Technology also receive the vast majority of all funding available (in 2020, American venture capitalists invested 428 million USD in startups per day,[10] predominantly in these two domains[11]). Aesthetics, institutions of political Power such as courts, police, and parliaments, Science, Narrative, and Ethics are comparably underfunded. Among the results: we are trying to grasp and regulate the realities of the 21st Century and its technologies with the epistemologies and institutions of the 19th and 20th Centuries.

What Happens When Domains do not Collaborate

In each of the seven domains, we can choose to collaborate or not collaborate with the rest. It is not uncommon that we become absorbed by one aspect of life as individuals, and it is not uncommon that professionals in any one of the domains become entirely occupied by what goes on in that domain and blind to the effects this has on the rest of society.

If one domain (i.e. the people, institutions, communities etc. in one domain) does not pay attention to the rest, it tends to have dire consequences, maybe not to the domain itself right away, but to the rest of society, community, or organization:

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[10] See https://techcrunch.com/2021/01/19/in-2020-vcs-invested-428m-into-us-based-startups-every-day/?
[11] See https://graphics.wsj.com/venture-capital-deals/

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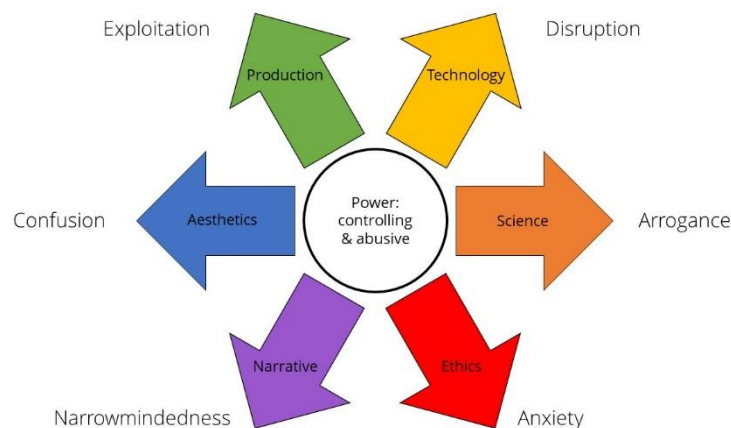*Futures of Education, Culture & Nature – Learning to Become*

Figure 4: When Domains do not Collaborate

- **Production** becomes exploitative and abuses people and planet.
- **Technology** disrupts existing political and societal structures; creative disruption can be very productive, but it can also lead to revamping ownerwhip structures and pull the economic rug away under the feet of sectors that support millions of people and thereby cause increased inequality and social unrest.
- **Aesthetics** that are too complex for people to grasp can cause confusion rather than increasing the shared symbolic world; it is of course not a problem that avantgarde art does this, it is what avantgarde art is supposed to do, but it means that society needs to bridge the gap through bildung, education, popularization, and conversation.
- **Power** that does not allow the outer domains to evolve freely will have to use immense amounts of violence in order to hold back creativity in the other domains.
- **Science** becomes arrogant, and rather than enlightening everybody, it can become a threat to everybody if, say, somebody genetically engineers a virus.
- **Narrative** becomes narrowmindedness when one narrative does not allow other narratives or insights from the other domains; religious fundamentalism and political extremism are two such examples.
- **Ethics** can become complex and advanced beyond what people are capable of grasping, feeling, and following based on their existing education, experiences, and bildung, and this can cause anxiety. Wokeness and critical race theory are two such examples; these break down existing moral values among many people, and if they are imposed forcefully rather than through, for instance, Aesthetics and shared Narrative, people are going to react with fear and anger.

The Thriving and Resilient Society

In the thriving and resilient society, actors not only care about their own domain but care about all of society and all the other domains, they "reach across the Rose," so to speak, and include truths, values, knowledge, and practices form the other domains. This can be done deliberately, and it can thus also be promoted deliberately:

- When Production has Ethichs, society can enjoy sustainable prosperity.
- When Narratives are updated as Technology is evolving, and Technology is taking into account the moral norms embedded in Narrative, we can have meaningful development.
- When Aesthetics and Science collaborate, we can have deep education and understanding of the world around us.
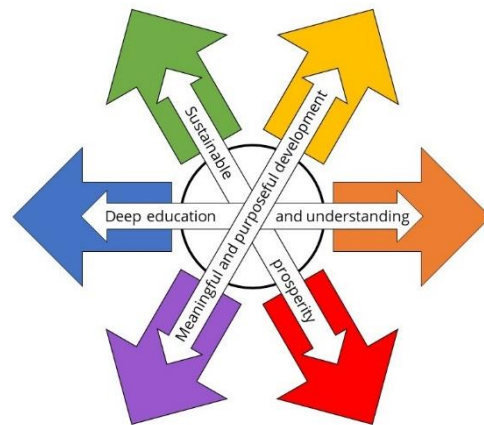
Power can promote this collaboration and no matter in which field we work, we can all contribute to this kind of awareness and collaboration.

Figure 5: Collaboration Across the Bildung Rose

What is, What Could Be, and What Ought to Be

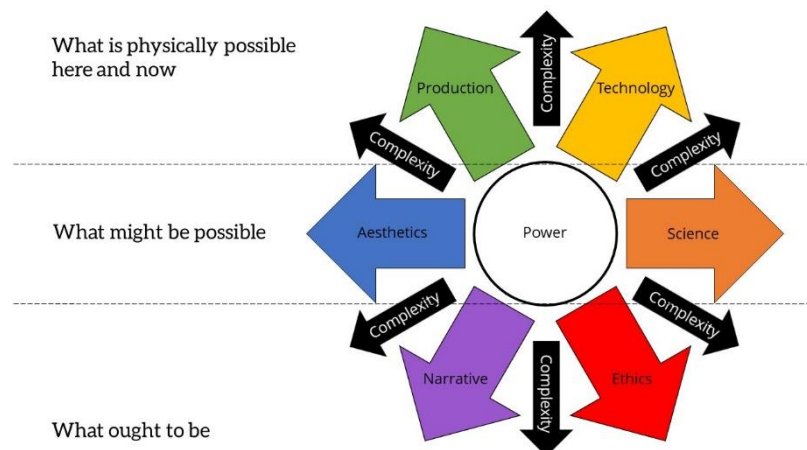There is a top, a middle, and a foundational layer in the Bildung Rose:

Figure 6: The Three Layers of the Bildung Rose

Production and Technology are very much about what is possible here and now; the raison d'etres for the two domains are pretty much the same: more, faster, efficient; competition is a driving force for success.

Aesthetics, Power, and Science are all about exploration: What might be possible. In three very different ways: Avantgarde arts and even pop-culture are about expressing what ordinary prose cannot grasp, they are about pushing the boundary for what can be said, and we enjoy them because they move us. "Move" in the emotional sense, but also in the sense that we change our positions, we are moved from one understanding of ourselves and the world to another. Aesthetics open our minds and emotions to new possibilities. Politics, political Power, is about exploring in which direction society can go. It is a battle of values and ideas, an exchange of visions, and a negotiation of compromises. Science is about exploration and reaching new understanding, and as such, it is very much a process of uncovering what is already "out there," but before each scientific inquiry, there is wondering, a creative thought of "What if…?" or "Maybe this phenomenon is really different from what we know as the truth right

now." The middle layer of the Bildung Rose represents "Maybe things could be different or could be understood differently."

Narrative and Ethics are both about what ought to be. Narrative provides moral norms and guidance in familiar situations; Ethics provides principles for what kind of moral norms we ought to develop as we are facing a new situation.

In the postmodern societies with a neo-liberal economy, we have become really good at pursuing what is possible here and now, and we have built our economies and almost also our societies and nations around competing. Despite facing major climate changes, we are really poor at discussing what might be possible, and we have more or less given up on any conversation about what ought to be.

Education, Nature, and Body in the Bildung Rose

There are particularly three questions that people ask when first introduced to the Bildung Rose: Where is education? Where are nature and the environment? Where is the body; all of this is very cerebral and intellectual? The answer to all three questions is the same: They are (or should be) in all domains, but in different ways.

Where is Education in the Bildung Rose?

Education is in all domains — all functioning societies teach all domains, and in the modern, complex societies, each domain has its own dedicated educational contexts — and general education in primary, secondary, and tertiary education ought to teach about all the domains.

Education looks somewhat diftttttt in the seven domains since all the domains carry their own individual methods and educational tradition; a traditional mix of theory and practice; knowledge that needs to be transferred from teachers to students and tacit knowledge and skills that can only come with practice and personal struggle towards mastery.

- **Education in Production** used to be by apprenticeship, which still exists in many places, but trade and business schools reflect the modern need for theoretical knowledge beyond the practical skills. Particularly the business world has been the driver of various forms of adult education in order to upgrade people's professional skills so they can produce more faster, and most leadership development and much of the developmental psychology, including the work of Robert Kegan, have been developed with the specific goal of serving the corporate business world and production.
- **Education in Technology** has evolved similarly, what is new in the 21st Century is that technologies are now so advanced and complex that not only is it only the experts who understand them, contrary to, say, the steam engine, it is also almost impossible to explain to lay people how new technologies work; the ordinary citizen and our politicians need advanced math and engineering education if they are to truly grasp the inner workings of computers and algorithms. Less will do, because the understanding we need in order to legislate wisely regarding the new technologies is not so much about how computer chips and AI work, but the overall structural changes created by new technologies and the disruptions they cause. Yet, the technological development is so fast (and furious) that our political powers cannot contain them, we all need an educational upgrade on the development, and the tech industries ought to provide that along with their products. What is new in the 21st Century is also that the development of technology is increasingly about creating new needs rather than creating

tools for solving current needs. Technology has become a product in itself and tech companies have become products in themselves; the successful start-up is not a company that produces a successful app, the successful start-up is sold to one of the tech giants and the founder can then go on to start another start-up he can sell.

- **Education in Aesthetics** generally has to begin in childhood if one is to become one of the artists who push the boundaries and move their audience; a natural inclination towards dancing, drawing, painting, playing an instrument, or singing must be cultivated from an early age if one is to reach a strong, personal expression. Nevertheless, the rest of us also need to meet the aesthetics from an early age, and we need to have our senses tuned to the arts to fully appreciate them as we go through the different phases of emotional and moral development. The more music and singing we learn from an early age, the more nuances we can pick up in music later, and the richer our experience and our appreciation of the arts can be as adults. This is more than a "nice to have;" it is crucial for the ability to fully decode the culture we are in, which also means that it enriches our own capabilities of expression and communication.

- **Education in Power** means civics. We all need this, but most of us who get it usually get it before the age of suffrage, and many of us do not pay attention because we have no use for the knowledge yet. In all societies, it would make a lot of sense to learn about the political institutions in more depth in our 30s when we have had an actual chance to be active citizens.

- **Education in Science** is standard curriculum in modern school systems, but the quality varies considerably and particularly topics such as biology and physics put high demands on resources. One thing that is rarely taught, which is very strange since it would cost absolutely nothing, is what science actually is, i.e. the scientific process: idea > hypothesis > exploring and testing > trying to prove oneself and the hypothesis wrong > writing paper > submitting paper > peer review > rewriting paper > getting published > getting a new idea. The fact that science is not just a set of results but a process of rewriting existing truths based on a particular method and work ethic is rarely made explicit in primary and secondary school, but it should be and could be.

- **Education in Narrative** begins as education through narrative: by telling stories, we teach children about our moral values. Traditionally, schooling was mostly about this: passing on the religious world view of society and not tolerating any questions to the narrative from the students. In modern societies, children are introduced to multiple narratives, and they may or may not be encouraged to question them; in postmodern societies, all narratives are deconstructed, which makes it hard—if not impossible—to get a true and honest emotional connection to the moral values of the narratives. It is a fundamental trait of our species that we learn and teach through storytelling, and that we turn our experiences into stories to share them with others. In modern schools, storytelling is probably most often seen as entertainment, but this is a misunderstanding: stories help us navigate our culture and our individual lives and the more of our shared stories we learn in school, the closer we get to the source of our society. Furthermore, all children are by nature story sponges and storytellers, and rather than improving their storytelling skills in order for them to tell stories with more emotional and moral depth, school favors academic writing, and we lose an important potential for deeper communication. Instead of becoming good at telling stories,

schools teach now to analyze narratives academically in order to deconstruct their structures and origins, and writing itself is taught in the same way.[12]

- **Education in Ethics** barely exists in any schools; philosophy is only taught to those who choose it deliberately in high school or college. This is a strange fact since all children are by nature philosophers who keep asking "Why?" This curiosity about the world and the strong, natural inclination towards figuring out what it means to be a good person that gets praise from their parents and other adults most schools manage to kill rather than develop.

Overall, current educational systems are focused on passing on and upgrading knowledge and skills for Production and Technology; that which improves employability with regards to creating more of what is possible here and now. In affluent school systems, generally there is education available in Aesthetics, Power, and Science, i.e. the domains that allow us to explore what might be possible, but in the neo-liberal economy these are generally seen as nice-to-haves rather than essential to our creativity and ability to produce new knowledge and understanding, i.e. help improve our meaning-making and ability to engage as citizens. Finally, Narrative, which is at the foundation of traditional learning, and Ethics, both of which children have a natural inclination towards, are more or less ignored in modern educational systems and if the approach is postmodern, then they are just deconstructed and not provided as a crucial framework for meaning-making.

Education needs to balance all seven domains for our inner world to match the outer world, and as the world becomes increasingly complex, the more so. Everybody needs to be able to navigate all seven domains when they turn 18 and are considered adults, citizens, and voters. The stability and prosperity of society depend on it.

As we go on to specialize as professionals, we also ought to keep upgrading our understanding of the other domains within which we do not engage as professionals; we need to upgrade our understanding as citizens and individuals and as professionals. We can do this on our own initiative in our spare time, but professional training also ought to put into perspective the content they teach. The accountant taking a course in the latest legislation on accounting also needs to engage in a larger conversation about Narrative and Ethics; how does accounting practices relate to the existing moral values and the ethical principles behind our society? How can he or she take this conversation with him or her back to the company and their colleagues and would there be aesthetics or science that could support presenting the new insights to the colleagues who did not participate in the evening course? The biology professor who joins an international conference on, say, soil quality in regenerative agriculture should also get information and join discussions about technology and ethics and soil, about market conditions for production and the narratives that drive different production methods and the understanding of soil, the institutions of power should be represented and join the conversation, and to top it off, best cases of aesthetic science communication about soil should be part of the program so that the scientists become better at sharing with the rest of society their knowledge.

In short: the Bildung Rose can be used as a prism or a checklist whenever education is planned and designed. Did we cover all domains? Will all 1st graders be introduced to all domains? Will this scientific conference on nano-bots force all the scientists to consider the moral norms they are challenging and the ethical principles they ought to follow?

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[12] See https://teaching.berkeley.edu/resources/assessment-and-evaluation/design-assessment/rubrics

An argument against using the Bildung Rose and introducing "all this extra stuff" would typically be that as a specialist, nobody has time and mental capacity for also engaging in topics that are not improving their expertise. This argument is valid if, as societies, we only want experts who have no contextual understanding, who do not see individual systems as interconnected wholes (i.e. who are not capable of a systems perspective) and who are not interested in the wider consequences of their work.

Where is Nature in the Bildung Rose?

Nature, understood as flora, fauna, soil, and water (and to some extent the Sun, the Moon, the stary sky, and minerals), is viewed and approached very differently in the seven domains, but between societies, the approach to nature in each domain is not that different from one society to the next, Power and Narrative being the two big exceptions:

- **Production** sees nature as a resource. This is particularly obvious in modern, capitalist societies, but all societies depend on food, clothing, shelter, and energy, and this is gathered, harvested, mined, or produced with resources from nature. Since modern humans emerged, our ancestors and we have changed nature around us and made species go extinct. The main difference today is that we know it and the magnitude of our impact.
- **Technology** is used to harvest or control nature; with each new technology, from the stone axe to mRNA vaccines, humans have taken a new step away from the dictate of nature and have provided ourselves with a new level of freedom from nature's boundaries.
- **Aesthetics** has allowed us to express our awe towards nature, our fears and joys, and aesthetics, be it as music, song, body ornament, or Romantic 19th Century paintings, has allowed us to express what words could not grasp: We are infinitely smaller than the sky under which we live, and we exist on nature's terms. We are nature, but we are also—through our various cultures and due to our language and consciousness and our technologies—outside nature; in all cultures around the globe and through all times, humans have grappled with this and struggled to express this through aesthetics. The sense of transcendence that is one of our capabilities as humans very often relates to nature and aesthetics can enhance this experience.
- **Power** can be distributed in many ways within society, but until recently, that had no influence on our relationship with nature. Humans had no power over nature, our relationship to nature was a given, and nature was the powerful part in the relationship. With today's climate change, mass extinction of species, and other critical human effects on nature, our relationship with nature has changed. Humans are now in power. Thereby nature is becoming a topic of political decisions and of containing our own powers in a radically new way, we have even named our time the Anthropocene and Power has do deal with this.
- **Science** is by definition occupied with studying nature and revealing its secrets. Among the parts of nature being studied by science is human nature. In pre-modern societies where there was no systematic production of knowledge in the scientific sense, there was nevertheless plenty of factual knowledge about nature, otherwise, people would not have survived. All societies have had a deep understanding of relationships and mechanisms in nature, of properties of plants and minerals, and of traits and patterns of movement and behavior in animal species; humans have always studied nature, but the methods have changed radically over the course of history.

- **Narrative** is the domain that differs the most among societies with regard to nature. Prehistoric hunter-gatherer societies embedded their factual knowledge about nature in narratives to pass it on to the next generation, and the metanarrative was usually animistic: nature was inhabited by spirits or was spirits. Premodern, traditional, agricultural bronze- and iron-age narratives increasingly set humans outside nature, particularly Judaism which explicitly put Man in charge of nature. The Western, modern, science-based narrative separated humans and nature completely and eventually tried to convince us that humans can control nature and can manage nature better than nature can manage nature. The latest narrative tells us that we are now destroying nature.
- **Ethics** about nature is hard to pin down, because only recently have we realized our impact on nature and the destructive powers in our hands. The concept of Natural Law, which is really about the relations among humans and not our relationship to nature,[13] in all its versions refers back to some supposed ethics or order or law in nature, but, tellingly, they have never been documented by science, they are all normative values. Ethics regarding nature we will have to dig out from under our civilizations and we need to separate it from Narrative and Science and figure out: What are the principles behind our relationship with nature and what will they have to be from now on given the powers that we have?

All seven domains thus have their own relationship to nature, and we need all of them.

Where is the Body in the Bildung Rose?

Presenting the Bildung Rose as societal domains and then our overlapping mental representations of these domains, the body may seem left out, but the body is in all domains, of course, but in different ways. Each domain has a different relationship to the body and treats the body accordingly, and the relationship to the body has gone through a tremendous development during history in all seven domains.

- **Production** always depended on the body, but production is becoming increasingly intellectual and detached from physical activity. The hunter-gatherer needed to be fit to run down prey, to have fine motor skills to make tools, and to have good hand-eye-coordination to shoot prey with a bow and arrow or a spear. The traditional farmers needed physical strength and endurance in order to till their fields, and the earliest farmers actually lived more brutish lives than contemporary hunter-gatherers, and skeletons show that they suffered from new diseases that came from living with livestock (Scarre, 2005, p. 718). With agriculture came slavery,[14] and the body of the enslaved was considered a beast of burden by the owner and may still be (there is still 40 million people living in slavery today[15]). Work in the industrial era became less physically hard in some ways, but the tempo went up and repetitive movements by the assembly line wore people down in a new way; the body of the worker was seen more or less as a commodity and almost like a part of the machinery. In the post-industrial society, the body is increasingly a vehicle that gets the mind to the computer

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[13] See https://www.britannica.com/topic/natural-law/Natural-law-in-the-Enlightenment-and-the-modern-era

[14] Some settled hunter-gatherers took slaves too (Graber, David & Wengrow, David: *The Dawn of Everything* (Farrar, Strauss and Giroux, 2021)

[15] See https://www.ilo.org/global/topics/forced-labour/lang--en/index.htm

screen; we still have to use our hands to type, but with virtual reality and AI assistants, we can soon talk to an avatar secretary in cyberspace, and some won't need their body at work at all.

- **Technology** was always an extension of the body, making up for our physical short-comings, and technologies were created to fit our body size and into our hands, particularly when individuals used to make their own tools. Currently, much technology is made to fit the size of men's bodies with the result that some items are dangerous or less safe to women, such as seat belts in cars.[16] It can therefore be said that Technology, even today, is very focused on the bodies of one half of the population while it ignores the bodies of the other half.

- **Aesthetics** emerged as the earliest members of the species Homo started keeping a rhythm together and invented dancing and singing; with furless humans, body ornaments were the earliest form of arts. In the classical Greek era, the beautiful human body was explored through the arts, and today plastic surgery is turning our actual bodies into aesthetic choices.

- **Power** is always related to control over the body as well as over the mind, but it is easier to control the body; to the great frustration of people in power, even the most horrible uses of physical violence have never guaranteed purity of thought in the victim. Modern democracy has complete freedom of the mind, there is almost complete freedom of expression, and it is only the actions performed with our bodies, such as violence and how to move around in traffic, that the political power regulates.

- **Science,** to a considerable extent, has its roots in medicine, and whereas traditional medicine saw the human as both body and spirit and much disease was explained spiritually, modern, Western medicine sees the body not just as detached from the mind and mental wellbeing, but also the individual organs as more or less unrelated to the other organs in the body. Chinese and Indian medicine have a holistic approach to the body that Western, science-based medicine has a hard time grasping, and only recently is Western science in general beginning to apply a systems perspectives on phenomena and including context in the analysis; there is a paradigm shift going on.

- **Narratives** regarding the body have varied tremendously across cultures, but most remarkable is the attitude towards our sexual desires and inclinations. The way that the body can distract our minds and the sex drives can take over and make people—particularly men—commit atrocities have caused civilizations severe headaches and have fostered some of the strongest taboos, not least regarding sex among relatives. Around the globe, whenever societies have reached a certain level of complexity, the men have generally decided that the women must hide their bodies as much as possible because the male mind cannot handle it otherwise, and entire civilizations have been built around narrative shaming, particularly the female body.

- **Ethics**, in general, has it that the body is sacred, perhaps even a temple for a spirit, but generally only the bodies of ingroup members count; sometimes the ingroup is men only.

The examples above are, of course, in no way exhaustive, but it illustrates how the body is absolutely present in all the domains, that all the domains have their own attitudes and aggendas towards the body, and that the body may also be used to approach each of the domains in different ways.

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[16] See https://www.bbc.com/news/world-us-canada-47725946

Can the Bildung Rose be Applied Universally?

The Bildung Rose was introduced more or less tongue-in-cheek in a Danish book of mine in 2007 (Andersen, 2007), and the initial point of drawing the domains was to show how Science pulled away from religion and its political power to achieve independence during the Renaissance. At this early stage, there were only three outer domains: Business (Production), Science, and Religion (Narrative), and governance in the middle. Soon I realized that there was something missing, which united each two of the outer domains, namely Technology, Ethics, and Aesthetics. Over the years, I saw still more aspects "appear" in the Bildung Rose (Figures 2-5), and as I presented the model in numerous keynotes it always produced the same result: Clarified facial expressions. Eventually, I wrote the first presentation in English in 2019: *The Bildung Rose*, the first paper produced in the think tank Nordic Bildung, and the book *Bildung: Keep Growing*, in 2020. The latest development of the Bildung Rose is the three layers of what ought to be, what could be, and what is possible here and now (Figure 6).

An obvious question is, of course, can this model be applied everywhere, or is it culture-specific matching, say, only the West in the aftermath of the Renaissance and the specialization of the domains? A fundamental claim regarding the Bildung Rose is that it is applicable to any human society at any point in history, and that particularly the element of balance among the domains is equally crucial in all societies at any point in time. Likewise, the demand on the individual to understand some of all domains in their society if they are to thrive in that society. Whether I am a hunter-gatherer on the African savannah or an urbanite in 21st century Tokyo, if I do not understand and can handle the technologies of my society, I am lost. If I do not know and understand the main narratives of my culture, I cannot communicate meaningfully with my compatriots, I cannot grasp the moral norms of my society and behave in such ways that people will respect me and trust me. Unless I have an idea of the Ethics, the principles behind who we are as a group, I won't be able to make moral decisions in unfamiliar situations.

To illustrate the universality of the Bildung Rose, here are three examples from very different places and times in the global human history:

Inuit Hunter-Gatherer Tribe 1929

In 1929, Danish Polar explorer Knud Rasmussen wrote an account of his amazing sleigh journey across Greenland (Rasmussen, 1929). The people he met in many respects lived very much like their ancestors did when they first arrived in Greenland 4-5000 years earlier, except that Christian missionaries from Denmark had done their utmost to baptize them and get rid of their old beliefs. By applying the Bildung Rose to the society Rasmussen presents, we get the following picture:

- **Production**: food, clothing, shelter, and energy is hunted and created by hand with what is available in nature right where they are.
- **Technology**: tools are self-made; there is some "import" of metal tools (a frying pan is mentioned) and some items are exchanged as gifts, but overall, all tools one must make oneself or together with others (such as a boat).
- **Aesthetics**: songs are invented on the spot to celebrate or lament concrete events. Danish missionaries seem to have succeeded in getting people to stop using tattoos, but the Inuits had a rich tattoo tradition and they carried deep spiritual meaning.
- **Power**: lies with shamans and wise elders, and to a large extent with the individual.

- **Science**: the Inuits have enormous insight into and understanding of their environment and Rasmussen only survives because he is welcomed whenever he reaches a hut and can rely on their information.
- **Narrative**: nature, not least the prey animals, have spirits, and humans need to be on good terms with them. Besides these narratives explaining the order of the world, there is a plethora of personal stories, jokes, and anecdotes that people share for entertainment.
- **Ethics**: always welcome a stranger, always respect nature, always survive and make sure the children do too.

What is striking is that it is all intertwined and balanced—and highly pragmatic. There are no dogmas, and one episode in the book recounts how somebody who was childless got a child from somebody else for a dog and a frying pan.

Taliban Rule in Afghanistan today

As we watch the news from Afghanistan and recall what Afghanistan looked like under Taliban rule 20+ years ago, the Bildung Rose brings out the following picture:

- **Production**: cannot feed the population nor keep the economy going.[17]
- **Technology**: nothing will be developed in Afghanistan,[18] but technologies from elsewhere are accepted to the extent that they can promote the Narrative.
- **Aesthetics**: may serve the Narrative only; people in Afghanistan fear that other art and aesthetics produced the past 20 years are likely to soon be destroyed.[19]
- **Power**: lies with the Narrative and is protected through violence.
- **Science**: is banned, particularly if it contradicts the Narrative.
- **Narrative**: one interpretation of the Quran and Sharia Law defines everything.
- **Ethics**: only the Narrative counts.

One domain, Narrative, defines all the other domains and violence is used to keep it that way. Individuals and institutions that try to challenge this risk their life.[20]

European Welfare State today

Overall, the EU member states plus Switzerland and Norway share the same societal and economic model: liberal democracy and an industrialized, mixed economy with redistribution via taxes and welfare services. While there are many differences among individual countries, particularly in wealth and the extent of the social welfare system, compared to the rest of the world, European nations can be said to share the same societal model; through the lens of the Bildung Rose, it looks like this:

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[17] See https://www.washingtonpost.com/world/asia_pacific/afghanistan-economy-taliban/2021/10/02/be142044-214b-11ec-a8d9-0827a2a4b915_story.html

[18] See https://www.msn.com/en-us/news/technology/more-members-of-afghanistans-all-girls-robotics-team-flee-the-taliban/ar-AANo34i

[19] See https://www.washingtonpost.com/world/asia_pacific/afghanistan-taliban-arts-culture/2021/09/29/c58c79bc-1b0a-11ec-bea8-308ea134594f_story.html

[20] See https://nypost.com/2021/10/21/taliban-beheaded-afghanistan-volleyball-player-coach/

- **Production** is industrialized, including agriculture, and the output is high and homogenous. Production is heavily regulated regarding consumer safety, environmental protection, and worker's rights, protection, and safety. Capitalism is the main economic model behind production, but cooperatives have played a significant role historically. The markets are generally very complex with several business models, and businesses vary in size.
- **Technology** and technological development play a huge part in the European economies, but Europe does not have a start-up scene nor tech giants that match the US. Instead, the EU has the political will to take political responsibility for the technological development and regulate both algorithms and the companies behind them to protect European citizens. (A joint US and EU effort to create a legislative framework around tech development that would support democracy rather than undermine it through surveillance capitalism (Zuboff 2019) would be preferable, but that discussion is beyond the scope of this article.)
- **Aesthetics** is rich across Europe and within each European country; the cultural heritage is diverse and complex.
- **Power** is democratic, not just at the state level, but in municipalities and self-organized associations of all kinds.
- **Science** has a long and strong tradition, with nine of the ten oldest universities in the world being in Europe.[21] 56 of the top 100 universities are in the US, 21 of them in Europe; 36 of the top 100-200 universities are in the US, 52 of them in Europe.[22]
- **Narrative** has had bloody consequences in Europe since Christianity demanded a monopoly on truth and until the end of the Holocaust. Since the Peace of Westphalia in 1648, Europeans have enjoyed collective freedom of Narrative, and since the 1800s, individual freedom of Narrative. Among the narratives that emerged from European history and culture are the three major political ideologies: liberalism, socialism, and conservatism, plus Marxism, several other -isms, and nationalism. The national narrative is a powerful factor in creating the imagined community (Anderson 1983) necessary to support a universal welfare system across a nation, but it is also, of course, a dangerous source of toxicity when it is turned against other nations and peoples, minorities, and immigrants. Since the fall of the Berlin Wall, one major political narrative has been the Market, which will supposedly fix most things if only it gets the opportunity.
- **Ethics**; the concept was born in Europe. It has also been completely ignored as well as it has seen tremendous development through history, and WW1, WW2, and the Holocaust catapulted European Ethics into an era of universal human rights and universal human dignity. As the generations who lived through WW2 and the Holocaust are dying, and with them their personal memory of the atrocities, Ethics in Europe risks sliding away from universal human rights and dignity; on the other hand, there is a strong environmental ethics emerging, which reveres all life.

The current European nations very much came about through wars with each other, but also through cultural exchange and a unique, relatively organic development across all seven domains of the Bildung Rose. Since the fall of the Berlin Wall, however, the political power has more or less handed over politics to the market, i.e. Power has handed itself over to

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Production and Technology. As a result, the other domains are comparably underfunded, also with regards to education: schools are there to deliver a qualified workforce that can compete in the global market. This goes for primary, secondary, and tertiary education, and it goes for much of adult education as well.

Concrete Applications of the Bildung Rose

The Bildung Rose was published for the first time in English in October 2019 by the think tank Nordic Bildung,[23] and while it has been presented in lectures, interviews, videos, and articles since, it has not yet been tested as a tool. These are some of the ways my colleagues and I at Nordic Bildung suggest that the Bildung Rose can be applied as an analytical tool and a check-list conversation starter.

Continent, Country, State, and Municipality Politicy Maknning

Whenever public authorities develop policies, new programs, legislation, institutions etc. or update the existing, we suggest that the Bildung Rose can be used as a prism through which to see and analyze whether all aspects of the Rose have been properly considered; the following are just examples of useful questions:

- **Production**: What is it we are about to produce that is not there already? What should be the output? Are we producing it in the best possible way? What are the necessary resources?
- **Technology**: Are we implementing and using the most suitable technologies? Do we know which other technologies are out there and in the pipeline? Who owns them? Will we be handing over citizen/user data or rights to third parties? Will this technology allow us to keep our sovereignty?
- **Aesthetics**: How does this feel? What are the signals we are trying to send? Does this need special communication, website, design etc.? Is it appealing? These questions can be understood literally if, say, a municipality is designing a new town hall and architecture, landscape, and furniture etc. need to work together, but they may as well be understood figuratively as an analysis of whether communication is honest or just aesthetic spin.
- **Power**: Who else should be involved in developing and deciding this?
- **Science**: Are we basing this on the most advanced science and research available?
- **Narrative**: What is the story we are trying to tell about ourselves with this? Is it true?
- **Ethics**: Are we doing this because we can or because it is the right thing to do? Who will this affect and how?

For each of the seven domains, there is also the crucial question, of course: Are we qualified to make the analysis and draw the conclusion regarding this domain? If we are all economists, or if we are all engineers, what is it that we are not trained to see? Can we put together a team that includes professionals from all seven domains? Say, an economist, an engineer, an artist, a legal scholar, a professor in a relevant field, a historian, and a philosopher. Dare we hear their input regarding what we are about to create?

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[23] See https://nordicbildung.org/papers/the-bildung-rose/

Organizations

Using the Bildung Rose in organizations such as companies and NGO's—or for that matter, a department or a project group in an organization—should not be fundamentally different from the scenario above regarding public authorities. For each domain, ask hard questions and consider if the necessary professional knowledge and understanding is present in the group. An honest discussion about "What is it that we know nothing about?" would probably be enlightening in most places.

Individual Lives and Career Planning

Since the Bildung Rose is very much about the knowledge necessary for the individual in order to thrive in his or her society, the Bildung Rose may, of course, also be used as a tool for personal exploration of previous and future education, life circumstances, and life choices. Some of the questions one might choose to ask are the following:

- **Production**: Can I support myself and my family in the current economy? Is my education up to date or should I upgrade it or maybe choose a new path in life? Might my existing qualifications serve me better if I changed my career? Say, if I am an experienced gardener, should I become a biology teacher? And might that open some doors to working with sustainability in the corporate business world?
- **Technology**: Am I lost? Or semi-lost? If I am, where do I go and get the understanding and skills that I need not to be lost? If I am not lost but actually very comfortable about technology, can I use this knowledge to the benefit of others? Are my friends, family, and older relatives comfortable with the technologies in their everyday lives? If not, can I help them?
- **Aesthetics**: Do I have a taste? Do I know myself through a musical genre or an art form? Do I ever explore music, film, theater, paintings, or literature that seem weird to me? Have I ever had somebody explain to me art that I do not get at all? Am I willing to be challenged and surprised by entertainment and art that is not my taste?
- **Power**: How much did I learn in school about my status and obligations as a citizen? Did I read up on it as an adult? Or am I just taking my life as a political subject for granted? With whom do I discuss politics; only people who agree with me, or people whose views I do not understand?
- **Science**: How do I feel about science? Do I find science interesting, fascinating, intimidating, horrible, or just impossible to understand? Do I know what is going on in science? If I would like to know more about science, do I know where to go looking for it? If I do not want to know more about science, why?
- **Narrative**: How well do I know my own origin? How well do I know the origin of my culture and local community? Can I put the daily news into a historical context and understand where different political ideologies, institutions, countries, and global conflicts and challenges are coming from? Do I have a spiritual community where the moral norms of my life are shared and we talk about what is important in life?
- **Ethics**: Where do my moral norms come from? Have I ever questioned them? Did I ever live in another culture with other norms that challenged my moral values? What did I learn from that? When was the last time I changed something fundamental in my life; why did I do that? Did I ever read a book or an article about ethics and moral philosophy? How often do I talk to others about ethics? Do I ever do it at work?

There are many more questions one could ask oneself using the Bildung Rose as a prism.

What are the Conflicting Truths and Interests?

Whether one uses the Bildung Rose professionally or in one's own life, as crucial as each domain is, are the possible conflicts among the domains. Are there things going on in one domain that prevents development in one or more of the others? If there are, are we/I willing to address them and create balance among the seven domains?

Conclusion

The Bildung Rose is a heuristic model that describes societies and individual lives as thriving when seven domains are in balance. It can be applied systematically for scientific inquiry in the social sciences, in creative processes, and in individual lives across cultures, but the model needs to be tested as a tool for this in order to establish its usefulness as a tool. Systematic and scientific investigation of the construction of and the claims about the model i.e. an academic deconstruction of the bildung Rose would be most welcome; this has not been done yet, and this is an invitation. Bildung is a concept that is hard to quantify and make objective, since by definition, it regards individual emotional and moral development, development of personal character, and development in one's particular culture at a particular time in history. However, bildung can be broken down into two kinds of knowledge: 1) Easily transferable knowledge and horizontal education; 2) generally non-transferable knowledge and vertical development. The Bildung Rose allows a richer understanding of the relationship between transferable/horizontal knowledge and non-transferable/vertical knowledge. Fichte and Piaget, each in their way, mentioned pushbacks and reconfiguring our understanding as a path to the development of the mind, and both connected this reconfiguration to emotional development, i.e. the vertical knowledge and development, a development Schiller called bildung. The Bildung Rose allows us to make bildung more concrete and tangible by allowing us to go looking for seven aspects of life and how each of them works for us. In a complex world, this may be very useful because it breaks down the complexity into seven different aspects and one can explore each of them individually as well as their interaction. The Bildung Rose can thus helps us get a systems perspective on society, organizations, educational programs, projects, and individual lives.

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