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Public Administration reforms in times of polycrisis: a multilevel-analysis

The paper will describe future tasks and reforms of public administration (PA) on the background of polycrisis in national (and international) configurations ("Zeitenwende"/change of times: word of the year 2022 in Germany). This back-ground-analysis of society ("the whole elephant") is necessary for the understand-ding of administrative challenges and the possibility of international comparisons. The increasing complexity (multilateralism) and contingency (loss of support and compliance with regard to (inter-) national contracts) in the "world society" makes it ever more difficult to compare practical experiences and to develop well-founded scientific insights. The paper, therefore, will rely mainly on observations from Germany.

Part1: *The paper will start with some observations of polycrisis in Germany - based on various publications by public media. It will address specially reports about the interdependencies of causes and consequences of crisis phenomena: complexity and contingency. The main focus of the overview will be directed towards the role of politics and PA ("blame-game"?).*

Part 2: *In this part the polycrisis is reformulated in theory-based terms. By using the system-theoretical approach of Niklas Luhmann (1927-1998) the (historical) development and current interdependencies of functional (sub-) systems of society (politics, civil society, law, economy, science etc...) - based on various forms of communication - and their "synchronization" will be analysed. A key element will also be the forms of population-inclusion into these societal subsystems - and the increasing number of "echo-chambers", leading to communicative separation and isolation.*

Part 3: *A short review of polycrisis will be given in system-theoretical terms. The focus will be on organizational systems and their mutual relationships (observation, irritation, resonance, capturing, self-restriction, modes of coupling etc.); thereby the special role of politics and PA (as a kind of synchronizer of resonance and inclusion) will be described - on the basis of existing (complex) architectures und processes. It also includes the dimensions and consequences of partial non-acceptance by the population: lack of trust; criticism of "bureaucracy"; bodily attacs against institutions and staff members; lack of knowledge about "the system"?*

Part 4: *Some findings from a recent empirical project (in NRW/Germany) about local administrative implementation processes and their problems will be described. They focus on problems of today and tomorrow which have to include a broad spectrum of societal subsystems: climate (sustainability) and migration (demographic development): how is a productive communication and decision-making in horizontal and vertical lines possible?*

Part 5: *A short summary will describe important goals/strategies for the further development of a functional differentiated society and opens the view at some (authoritarian) alternatives and the future problems of international cooperation.*

1. Introduction

Before starting with a description of polycrisis, the term "crisis" has to be analysed. The problem of this term is its character as an "overloaded signifier". It is used with regard to historical developments and to global situations - in natural and in societal terms – as well with selected segments or elements of it. In general terms crisis is described as a difficult and demanding situation – with the loss of control, the possibility of dangers and catastrophic developments. Often (not always) they are new and unexpected. Emergency, disaster, trouble, dilemma, crunch, contingency, change and many alternative descriptions are used for such a situation. They can happen unexpected (by chance), expected or even initiated (consciously brought about). Therefore, the contrast is often also an “overloaded signifier”: routine, normality, conformity with expectations, standards, etc.

The consequence of this “overload” is the application of this term in and to many situations – from individual to global - and even the ambivalent valuation of a crisis and its causes and consequences: making processes and structures better or worse? This situation also implies a high variation of communication-settings – not only with regard to societal sectors but also within – for example – the scientific communication. A special – even dominant – role is occupied by public and “social” media. “Crisis” is a keyword for the capturing of attention and interest: bad news “pay better” than good news. Therefore, communicating about “polycrisis” offers lots of content and has high potentials for media-addiction.

However, this should not lead towards scientific ignorance with regard to a search for specific associations and analyses. By following Adam Tooze a polycrisis can be described as a situation with multiple crises, which have mutual influences and reinforcements. Therefore, the overwhelming numbers of crises have to be seen as a complex configuration in horizontal and vertical directions: feedback-loops, with enhancing effects, risk-aggregation etc. They have to be identified and analysed. With other words: a complex set of elements or even some basis architectures (relationships) have to be specified – in order to describe the relevant interdependencies of a polycrisis.

A view on a recent conference about topics of polycrisis in political science in Germany (DVPW 2024) illustrated the complications and challenges: almost 100 panels for presentations and discussions had been defined. A few examples can illustrate the multiplicity of content.

Emotions and electoral behaviour in times of uncertainty and crisis

Geo-economics: elite communication and public opinion

Global crisis dynamics and infrastructure policy

Societal cohesion in the polycrisis

Good government in crisis

Inclusion of marginalized groups in polycrisis management

Ramifications of Chinas´s global ambitions: navigating brewing

Judicial responses in crisis situations

Large language models in political science

Migration policies in polycricis: climate change, pandemic, war and forced migration

Mobilization in autocracies: unveiling the dynamics of pro-government rallies

Crises for ensuring resilient agri-food systems

The “supply-chain-law” as an answer to polycrisis?

Planetary health in times of crises: what prospects for global sustainability politics

Political socialization in times of multiple crises

//and 83 other panel-titles//

2. Media based communication about crises and polycrisis

Although polycrisis is described as a global phenomenon – f.e. as a consequence of climate change and its recent effects (heat, fires, storms, flooding, droughts, etc.) it has also regional/national specifics: happenings, perceptions, descriptions and evaluations. Therefore, the following examples of crisis-related communication are primarily taken from the German experience.

It can be started with the election of a new government in 2021. Two complications could be seen at the very beginning: the increasing number of political networks (parties) and the “mortgage” of the earlier governments – which have focused on short term initiatives (“Steuerung auf Sicht”/control at sight). The result: a coalition of three political parties (with quite different perspectives) and the announcement

of “Zeitenwende” (change of times) – which was selected as the “word of the year” in 2022. The challenges were increased by the effects of previous developments (2019pp) – f. e. the corona-pandemic, the “Fridays for Future”- demonstrations and the gains of right wing political parties. All this increased the complexity and insecurity of perspectives for the future – i.e. the level of crises-potential. This was heavily augmented by the beginning of the Russian military attack against the Ukraine (February. 2022) and the reduction of Russian gas – supply for Germany. The war in the Ukraine also produced conflicts between political parties in Germany and in the European Union. It also increased the controversies about migration into and between European countries. In addition, the multiple military conflicts in the Near East (esp. Gaza and Israel) enforced the development of a polycrisis. Finally, the elections in the EU, in the eastern federal states of Germany and in the US increased the ambiguities and fears about future options. May be, that this intensified the internal conflicts in the three-party coalition of the German government – which collapsed in November 2024.

The start of the election campaign gives some first impressions about the priorities with regard to the crises to be attacked after the election (in spring 2025). It is already visible, that typical forms of avoidance/rejections of “mega-changes” will play an important role - because they would be criticised by large parts of the population (voters): “not in my backyard”; “not in my lifetime”.[1] The climate-related crises are good examples for this attitude: the problem is acknowledged but the initiatives towards sustainability are seldom accepted. This gives general indications for the role and quality of public communication about politics. The problem is its ambivalence: on one side the opinions and interests of the population (voters) have to be taken serious – because they often “”transport” everyday-experiences and problems (f.e. with local policy implementation). On the other side, the use of the “social” media is often flooded by fakes, manipulation, shit-storms and other modes of attention-capturing and fear arousal. One of the consequences is the increasing attention towards personnel reports about practical everyday experiences. By this, “the backyard” may even become an important element of the polycrisis[2] – independent of any reference to regional/national/glo-bal implications. In this context often described are: the damaged technical infrastructure (streets, bridges, rail), high energy-prizes, play-schools/schools with lack of staff, lack of housing options, lack of job options, increasing prizes (f. e. food, energy and others), problems with increasing immigration. Although not top on the list of problems as perceived by the public (Spiegel 51 (2024), p33.), but

[1] This sometimes is described as a “pillarization” of reform issues (Nassihi 2025).
[2] Quite typical: a TV broadcast “Wie geht es Deutschland?” (how is it going in Germany)

important for the polycrisis: social cleavages (increasing wealth of the super-rich); mistrust in political parties and government. The mass media are transporting all of these problems or challenges – often also with the reference to their mutual relationships.

From the perspective of social science a main point of concern is the most often missing reference to "the whole elephant". The macro-architecture is mainly reduced to a key-word (concept) – like democracy, legal system, liberal capitalism, federalism, special institutions (basic law, constitutional court etc.), human rights, autocratic regimes etc. etc. They all can be associated with crises-phenomena, but most often do not allow for an adequate reconstruction of a polycrisis. Even more complex is the necessary resonance with regard to various groups of citizens: age, habitat; ethnic, religious, cultural, social, economic affiliations – in conjunction with political orientations, interests and activities (f.e. protest). With other words: the multiplicity of modes of inclusion and their conflicts are indicators of diverse crises-conditions.

Many media in Germany have a special edition with the "Summary of the Year". The weekly newspaper "Der Spiegel" (Nr. 49a) titles the year 2024 as the "Schicksalsjahr der Demokratie " (fateful year of democracy) and – at the very beginning (in the key article) proposes "With more courage into the future!" The long list of topics includes "mass-demonstrations" for democracy; the growing of right wing parties; imported religious conflicts (by migration); economic crisis (decreasing car-production); looking at the growing number of despots world-wide; catastrophic weather events; invasion of tourists – pushing the local population out of their homes; Trump-comeback ….etc. : altogether "indicators of a polycrisis".[3]

In illustrative terms: a concept of "the elephant under observation" is needed: or at least a centipede trying to start moving. In the following, the system theory of Niklas Luhmann (1927-1998) – focussing on the problems of complexity and contingency in a functional differentiated society- is used for the ordering of polycrisis.

[3] The lack of the description of the complex societal context is the chance to tell the story of the centipede (cartoon in a newspaper), which has died. The reason: it was not able to decide, with which foot it should start moving. With other words: it had no view of the whole feet-arrangement.

3. Theoretical background for the analysis of the polycrisis of today

System theory has many origins, sources and versions. The following discussion concentrates on the “functional-structural”[4] and "autopoietic" version of this theory as it was developed by Niklas Luhmann. His theory has a universal perspective which covers almost all segments of society. *It focuses its observations on (social) communication.* Systems are areas of dense communication which are empirically separated from their environment(s). The necessity to generate systems of communication is seen in the ever increasing complexity and contingency of the growing modern world(-society). The function of system-building is the reduction of complexity and the coping with the unforeseeable: this ability can be described as a very basic and profound mode of resilience and sustainability. It becomes ever more important in a more interrelated (digital connected), modern world.

In the process of societal evolution different types of *functional subsystems* emerged[5], which are essential for the development and survival of growing numbers of population. They have organized their communication in different ways. This does not mean, that traditional modes of differentiation (territorial, hierarchical, centre vs. periphery) are not existing any more. They can remain as additions or might be “reinvented” for establishing a dictatorship, a kingdom or a cult. It is the advantage of this theory that it opens the view to different types of systems, their various functions and their multiple forms of functioning. One type of variation relates to the scope of communication systems: the simple social system = communication on the basis of personal presence; organizational social systems = systems which are specialized on decisions and which coordinate their communication basically by membership roles; societal subsystems = systems which fulfil specialized functions for society and use specific media and codes for each subsystem. The system of *world* society includes all communicators which can be reached by any communication.

The "autopoietic" character of the social systems strengthens the transparency of communication processes, because they can only do what they can do. They are closed in terms of internal operations (communication). At the same time the systems are open for “irritations” from the environment; sometimes they are even structurally coupled with aspects of their environment. Systems can observe the environment and its reactions to their operations. Nevertheless, the reactions to the

[4] Putting functions first has the advantage that the structures (organizations, institutions) are seen as varying in temporal and regional terms.

[5] Nota bene: there have been many different paths from a simple clan-structure towards a complex society. There are still different stages of this development observable worldwide. With other words “The end of history” (Fukuyama 1989) did not happen. The various historical developments cannot be described here. The analysis concentrates on a special typ of modernity: a functional differentiated society.

observations are rebound to the system-specific internal communication. All subsystems exist/survive because their specific operations contribute to the functioning of society - when dealing with complexity and the dynamics of globalization. The problem of this differentiation is evident: *there is no centre of society (like a king or dictator), from which strict coercion, commands or coordination is expected and accepted*. Every subsystem represents society – but only in a specific way. The specifics are *defined by function, media of communication and code*. In this theoretical context – f.e.(!) the economy: function = supply of society with privately produced, purchased and used goods and services; medium = money; code = payment - no payment. The PAS: function = setting of priorities for collective values/goals and the preparation and/or enforcing of binding decisions; medium= power and law; code =power (political majority) no power (political opposition); legal - illegal action. In similar formats the subsystems of education, public media, science, religion, law, health, family, civil society, are being defined with regard to function and medium of communication:
*Civil Society (a. societal self-alerting; b. sorrow),
*Public media (a. opinion formation; b. information),
*Science (a. developing knowledge; b. truth),
* Medicine (a. health care; b. course of disease),
* Education (a. preparing for participation; b. life cycle),
* Law (a. conflict regulation; b. jurisdiction),
* Family (a. socialisation; b. love, empathy),
* Religion (a. elimination of contingency; b. faith)

It becomes quite clear, that many countries in the world did not yet develop such a differentiation and the necessary inclusion of the population. This might be the case in "failed states", in countries with extensive natural resources[6] or under restrictive dictatorship – which can be based in politics, in religion, in economy, in military organizations etc.
This situation leads us to some restrictions in the further analysis: countries without any or with only a marginal functional differentiated system architecture and very limited public inclusion can not be analyzed appropriately. The analysis of the challenges and crisis-potential will focus on existing subsystems and their management. These challenges include: a. the fact that there is a lack of a central steering structure: all functional subsystems are the society, but only a part of it; b. the subsystems often lack self defined delineations/restriction or stopping rules; they must be stimulated from outside irritation; therefore, resonance between the subsystems (balancing) is necessary; c. the differentiation needs many persons

[6] "Resource course"

acting in the various systems: the inclusion of the population is an important feature. Therefore the issues for observation, analysis and propositions are:
- the performance of the subsystem (task fulfilment);
- how (much) is the subsystem influenced (captured) by others;
- how (much) is the subsystem influencing (capturing) others;
- degree and format of population-inclusion (into the subsystems);
- forms and effectiveness of observation, irritation, resonance – i.e. balance – between the subsystems.

It should be noted, that the substructures (organizations, simple social systems) can vary between subsystems and different societies. They can be analysed as "functional equivalents": f.e. different administrative architectures (more or less centralized or rather federal); f.e. different models of universities. However, they have to fulfil the same function by using the same code of communication[7].
Subsystems are representing society – but only in their specific scope, based on media and code. And therefore – more or less – they depend on each other. This is the reason why they observe, irritate or even influence other subsystems. To avoid a complete separation of the subsystems or a complete takeover by other subsystems – which most often will destroy their specific contribution to the survival and development of society – a kind of resonance and balance between them is necessary. This might not be visible with regard to small-scale tasks and practices, but it is essential for any fight against polycisis and for the development of a "new normal" for society.
Therefore, the interdependencies should be observed with different focus points and with varying intensity - for example! -:
* *Observation of other systems*: scope and intensity.
As all systems are depending (somehow) on (many/all) others, observation is an almost universal feature; however, the scope and frequency might be very different – between overload and ignorance; - between permanent and sporadic observation. In many systems special "watch-units" have been installed.
* *Irritation of the systems as a result of observations*:
Irritation can be an internal effect of observations – it might change the internal operations on a regular ("retention") or sporadic/situational base; it might even function as a kind of stop-rule – f.e. when observing the legal system[8]. The scope of

[7] With other words: it is not essential to put a sign "hospital" on the building, if the only focus is making money – by keeping persons as long as possible hospitalized. It is the same functional subsystem as the pub which keeps guests drinking all night: they are part of the economic system (if the flow of money is guaranteed).
[8] The difficulties to establish and enforce stop-rules are well known as a kind of escalating process – whereby new rules are the consequences of strategic ignorance of previous ones (f.e. corruption, tax-evasion, crime…) and at the same time the new rules are blamed as an excessive bureaucratization.

irritation is influenced by the scope of observation. The intensity of the effects depends on the ability of the systems to adopt new elements into their (specific) communication processes.

* *Double coding and structural coupling*:
There are fields of communication which are closely coupled: like public administration and law or education and politics. The processes within one system are depending on external conditions (other systems) – without being substituted by these environments. The most important example is the "conditio humana" as a precondition of communication ("interpenetration") and their co-evolution – as long as robots have not taken over.

* *System capture (destruction)*: Although such a situation seems to be unlikely in a society in which each subsystem depends on the fulfilment of other functions by other systems, it still happens (like in Turkey today – or even in EU-countries like Hungary [9]). This can be the beginning of the destruction of a functional differentiated society: chaos (failed states) or back to old models (like authoritarian models, dictatorship) – can be observed more often then expected and desired. Therefore, a continuous observation of the changes in the Trump-US is necessary.

When looking at mechanisms of inter-system-resonance two additional elements of the overall scenario have to be included. So far the systems under observation have been *social systems based on communication*, *which needs a message, a way of transmission and a reception/understanding.* The completion of such a process needs a "shared set of meaning". The basic achievement is the reduction of world complexity. Without such an achievement the world would end in chaos. [10] However, social systems have also to refer to two types of *non-social environments*: nature (ecology) and human beings (physical and mental disposition). If humans are not to be completely eliminated and nature is not completely destroyed social systems have to develop resonance towards these "external" systems. But this is far from self-evident – even for human beings who can participate in social communication/systems: this is not only a question of war but also of misuse in the economic and many other systems – altogether ignorance against the necessity of inclusion of the population and basic human rights.

[9] These examples can also be seen as a warning about the consequences: loss of societal capacities.

[10] Some features of it can be already observed in the new net of digitalized media: nobody is able to receive and decode the masses of data, which "arrive" on the smart-phones: it is mainly data overload and not communication. How difficult it is to organize communication can be seen in any talk show – if the moderator is not able to stop the participants talking all at the same time. With reference to individuals the new development can be described as "loss of civilized behaviour" (in German language: "Rüpel-Republik"). This can be observed not only in the pattern of hate speech and shit storms in the media but also in the form of physical attacks on staff members of police and rescue organizations. However, there are also situations with long tradition: it is well known that inspectors of food producing companies never execute their job without one or two colleagues on their side.

However, the problems of resonance are even more pressing with regard to nature. One of the reasons is quite clear: nature (flora, fauna, climate etc.) cannot participate in the social communication: people have to assume this role – like the pupils in Germany did it every Friday ("- for future"). Although there might be lots of controversial debates, many lobbyists and "merchants of doubt": the impact of the two external systems have more relevance (and often more effects) with regard to various subsystems of society: they cannot be easily ignored – as long as the world society is not accepting the entire substitution of humans by robots and/or the destruction of the globe. "Laws of nature" are not in the same way debatable as minimum wages for taxi-drivers (Uber?).
To use a category of resonance it can be said that "double coding" is necessary to avoid the enhancement of polycrises. Any communication and decision prevailing in a specific medium and code of a functional subsystem has to observe and show resonance to the "human condition" and to the architectures and logics of natural environment. Although this might be unexpected – especially in contrast to the speed of global commerce – the demand for resonance with regard to these two "natural" environments include ever more often also time-calculations. Since many decades *sciences* have already contributed to this perception of time limits for specific developments – i.e. the wastage and damage of natural resources, the human footprint. Much more often scientific contributions have addressed the "conditio humana" (life spans, phases of psychic and physical developments) - because they are included in the communication processes. This fact has lead system theory to consider a broad (multiple) *inclusion* of the population into the societal subsystems as an essential element: it is a possible way to ease/realize the above mentioned double coding. People could and would include their natural features and capacities into the communication and – eventually - also their experiences/knowledge from other subsystems, in which they are also included. "The population" (civil society) therefore can be an important source for necessary observations and resonance (or even balancing) between subsystems (with their specific code). Nowadays this can be better observed if the opposite is the case. Many explanations related to all variations of populism are dealing with the "exclusion" of parts of the population: from education, economy, health, science…- even politics. A quite different example is the mass-media system – which seems to be almost captured by civil society (based on Facebook, Youtube,, X, Tiktok…). However, this might lead to the danger of disruption of this functional subsystem altogether. Open remains the question: who will finally "capture" the media system: The political system with Trump, Xi Jinping, Erdogan ….. and all kinds of fake news or news-suppression; the economic system – dominated by the "masters of the universe" (Silicon Valley), the security system (observation by police; secret

service)….? The topic "cyber-war" (initiated from Russia, China and others) has become ever more importance – also in the context of the new election in Germany.

The overall development (evolution) of modern societies (with its population growth) stimulates the increasing complexity of the social world and its processes of differentiation – not only between but also within functional subsystems. As human beings are necessary elements of this development their inclusion into the systems plays a crucial role. This also holds true for the "management" of the various interdependencies which were listed above. There are many instruments which try to strengthen the individual abilities on behalf of the reductions (not identical with elimination!) of complexity: communicating in various functional systems; meetings between "representatives" of various systems, task/job rotation, mediation and coordination techniques; work and travel, voluntary social year, adult education ….These are all attempts to reduce or compensate extreme specialization and narrow-mindedness. All of this can contribute to the complicated task of "balancing" societal system without a centre with universal steering competence/power[11].
Any attempt to balance the subsystems is facilitated – if not only made possible – by a boundary of a societal (national) system. It helps to decide about the systems which should be observed and possibly reacted to (in internal communication). If the boundary is the world society with global governance and globalized economy etc. the balancing task is almost impossible[12]. Therefore, the typical mode of global governance is a kind of piecemeal strategy: small elements (rights, duties, prohibitions..) are selected for "irritation": but even if there are some of these elements defined – it is all but sure that they are also observed, accepted or implemented (elements of system--internal communications)[13]. The problems can even be illustrated with examples from the EU – in which somehow a trans-national level of balance is attempted – but not always reached[14].

[11] The development of China under the rule of the CCP should be observed closely as an adverse case – where ever more terms are forbidden in public communication.
[12] Just three examples: if the economic system is observing the education subsystem (for staff recruitment) it might have to observe the respective system in many countries. The same challenge can be seen, if the companies are controlled by "their" administration with regard to human rights applied by their sub-sub-sub-sub-contractor anywhere in the world economy. Another type of challenge is the "alignment" of international cooperation on behalf of developmental politics and projects.
[13] Child labour is forbidden in Germany – but how about German companies in African countries? Who can and will "irritate" the business organizations?
[14] The pressure has increased in times of disruptions in a multi-polarized world.

4. Polycrisis in the functional differentiated society

The preceding description of "the elephant" (and its complex architecture) can be used for collecting and structuring crises-observations. This can be started with the description of the evolutionary process of population growth and (by this) increasing interdependencies: complexity and contingency of natural environment, human behaviours and (especially) of modes of (subsystem-specific) communication. The identification of crises can start with everyday observations of mistakes and conflicts, unexpected events, catastrophes. All events can also have long-term effects: aggregation and reinforcement. In Germany this contrast was described as "Steuerung auf Sicht" (like migration politics 2015pp) and "visions" (concerning sustainability (emission reduction); pandemic prevention in the future (systemrelevante Leistungen/system-relevant services) etc. In the political debates of today these two sides of crises-descriptions were used as a kind of "blame-game": no adequate/effective decisions taken – although possible crisis-developments were already visible (f.e. repair and development of infrastructure). This all refers to various forms and contents of communication: the capturing and management of attention, the "merchants of doubt", fake news in the "social" media etc. There are many examples of well-founded risks "for the elephant" and only little (large scale) public communication – especially, if the risks are coming from the natural environment (see SDG2030; earth overshoot day) – or (also) from international networks: "in my backyard", "in my lifetime".

4.1Crises in the functional subsystems of society

The evolutional development of functional subsystems of society was founded by and is still based on specialized communication on behalf of improving performance and problem solving in each subsystem. The communication in the media systems can be used as a source for observations because they are partially subdivided with regard to these functional subsystems. Reports about performance of and crises in a subsystem under specialized observation is almost a duty. In the last years crisis-phenomena have most often been described:

a. with regard to the *economic system:* De-growth (BIP-reduction: reduction of exports); loss of jobs; lack of staff with high expertise; lack of innovation in the management of large companies; "new work" (stands for work-life balance) etc
The availability of specific goods (f.e. flats, electric cars, electronic tools) is insufficient. An important reason in the background is (often) the lack of natural resources (like oil, gas, special minerals etc.). However, its availability is often

described as “resource-curse”: it prevents engagement in innovation and transformation for the future, because everything can be bought abroad.

b. with regard to the *health system*: Access to services; costs; regional differences of infrastructure and services; increasing costs for insurance contracts; lack of qualified staff (if no immigrants available); too little reflections about the corona pandemic (“system-relevant infrastructure” (f.e. slack resources in the public health sector)) etc.

c. with regard to the *education system*: Lack of staff in kindergarten/nursery schools and in schools; infrastructure with deficiencies (buildings, toilets); differences between the rules of the 16 federal states (Bundesländer); increasing number of pupils with immigration background (without ability to use the German language); reduction of the quality of grades in the younger generations (results from PISA studies; partially digital dementia).

d. with regard to the *mass media (incl. Social media channels)*: Traditional public media (newspaper, radio, TV) are loosing users and often copy communication-formats of the “social” media (f.e. “bashing” persons and institutions) – to catch attention in a confusing world of communicators. The function of this subsystem (provision of substantive information) evermore includes the fight against fake news.

e. with regard to *Civil society/the public*: Living conditions are becoming ever more complex and contingent. This is seen as differences in indicators of region (East-West-Germany; city vs. rural area), education, income/wealth. Criticism is fostered by communication in “social” media channels and their apps, pod casts, echo-chambers, clans, parallel-societies. There is an increasing frustration about the complexity of society – and a search for simple solutions to crisis prevention (especially in right wing parties).

f. with regard to *Religion:* Besides critical debates about the reluctance of church leaders to punish misbehaviour of priests, new problems develop from the immigration of different religious communities – especially if they threaten or attack other religious believers physically.

g. with regard to *Public Administration*: Complications to organize stable routines – especially with regard to personal services (co-production). Although “bureaucratization” is criticised mainly with regard to national (and European) politics, the implementation is done by PA- staff and organisation: a shift of the “blame-game” towards PA is typical. Insufficient digitalization is a specific

element. On the other side, a lack of rule-implementation is seen as potential for corruption – especially, if international networks are included.

h. with regard to the *political actors and institutions*: Trust of the population in politics is diminishing. The criticisms concentrate on the lack of responsiveness to citizens problems and interests, and on the deficiencies of representation of the public in political institutions. This and other problems have lead to an extension of political parties – especially on the right wing of the political spectrum. This makes it more complicated, to build a government-coalition. The break down of the German (and also French and Austrian) government is seen as threatening example for the coming competition between political parties and their elections.

4.2 Crises in mutual resonance between subsystems

Although there are specific functions, performance standards, programs and codes of communication in each functional subsystem, there are also mutual observations, irritations – and even forms of hijacking. Typical is the competition between economy and politics – often described as extensive lobbyism, "state-capitalism" (China) and even corruption. Other often cited examples are the economic "capturing" of health services or social housing. Therefore mutual resonance between the subsystems is an important prerequisite for crises-prevention. All subsystems are dependent on the quality of all others – but also on a kind of self-control and self-limitation: some "red lines" are necessary for every sub-system. Often "whistleblowers" have an important function. The terms for critical developments are various, because they can be tied to a specific subsystem: f.e. political dictatorship; economic monopoly; religious rules; public revolution; media-based manipulation (deep fakes, cyber war) etc.

4.3 Crises in/of inclusion principles

Within this analysis the term inclusion is used in a very broad sense – and not restricted to persons with a handicap, as is often done also in Germany.
The mutual resonance of functional subsystems is very often depending on the (multiple?) inclusion of the population into these various communication codes. This enlarges the mutual understanding and possibly the ability "to take the role of the other". Although there are many NGOs, voluntary organizations, citizen-forums, self-help groups, protest organizations etc. active, there are also

deficiencies with regard to "representative" inclusion as well with regard to the influence on relevant decisions taken within various subsystems on behalf of the population. An important reason is the growing complexity and heterogeneity of life style and living conditions in the population: it is not possible to react in 83,3 Mio special forms to the German population (by the end of 2023). However, often there is criticism because of the lack of impact assessment for decisions in the respective subsystems: cui bono? Who are the losers? What are the reasons for unequal effects??? When the German federal president gives his Christmas speech, he will always plead for more cohesion in society. But he cannot be sure that the majority agrees with this intention – because of the various ethnic, cultural, economic (etc.) backgrounds. In a functional differentiated society the relative importance of an intensive inclusion in one of the subsystems also has to be acknowledged: scientists, lawyers, priests, school-teachers, journalists, top managers, digital influencers … might have a very different view on "their" society[15]. This can also be influenced or even dominated by (digital and/or analogue) communication in international settings: not only with the beginning of the war in the Ukraine, the warnings with regard to Russian and Chinese digital attacks – with the aim to destruct the cohesion of the European Union and the German society – have increased rapidly.

4.4 Crisis of the balancing functions by the PAS

One important quintessence of the crises observed is the acknowledgement of deficiencies in a central management of the functional differentiated society: all subsystems are the society – but only a part of it. As they are highly depending on each other, forms of "crisis-transfer" are possible and likely. To reduce these transfers and – at the same time - avoid mutual "capturing" – as illustrated above – some balancing functions are necessary. They are mostly allocated in the political and administrative sub-system (PAS) – because they represent the very large proportion of the population (citizens! eligible voters). A typical indication is the poly-blame-game we have described for Germany. Many crises in one subsystem or a collection of them are attributed to failures of politics or public administration. "Too much bureaucracy" is a permanent criticism. Therefore, they are asked for improvements, reforms, solutions, even visions. As it could be observed in the phase of corona pandemic and also today, the PAS has taken over many tasks and/or financial functions from other subsystems. If this is only temporary it can be also described as a balancing strategy: helping a subsystem to fulfil its function properly. This can also be done by other subsystems – often "moderated by the

[15] Often, this is also described as a missing sense of community.

PAS". A good example is the loss of working presence of employees - because of insufficient care for the children: the company organizes its own nursery school. Another case is the "duale Ausbildung" (dual training): economy and education; or scientific advisory organizations: science and politics – and many others.

In conclusion: a balancing function – with the support and impetus of PAS-actors is an important element for avoiding the accumulation of crises – because often there is a mutual interdependency between the subsystems. This needs mutual observations, an adequate internal differentiation within the subsystem and the ability to combine the different communication codes: to understand the basic structure of "the elephant". Some topics can be addressed: "parliament of functional subsystems", "anti-disciplinary research", multiplicity of ministries, media-diversity, polyclinic, public advice networks ….They can contribute to the understanding of polycrisis and might help to develop solutions for the future.

4.5 Internal and external pushes to autocratic architectures

Difficulties and deficiencies in the balancing instruments – in the complex and contingent societal frame – are often the beginning of a general system change: towards an autocratic system. It often starts with the definition of borderlines (like Germany first, exit from EU, exit from Euro-currency) and continues with internal reduction of complexity (like exit of immigrants; stop of new immigration). At the end it is an abolishment of important features of an open and democratic society (Trump: "if you vote for me, you will never have to vote again"). In Germany (and elsewhere in Europe) also the reduction or capturing of subsystems (like public media, legal system, political parties etc.) could be first steps towards an autocratic system. This can be promoted by a radicalization and growth of nationalistic/right wing parties and contacts (cooperation) with dictators of other countries (the Russian president Putin as a recent example). Autocrats are influencing the liberal-democratic arrangements in Europe, because they are afraid to loose their own power position (Syria is a recent example). In Germany there is an ongoing debate about the possibility to ban the new right wing parties. The debate also includes the question of the motivation of the citizens/voters: is it an agreement with the policy goals of those parties – or primarily an expression of discontent with the crisis-management of the PAS. Therefore, it is important to acknowledge open public protests against these parties and their public appearance. There have also been steps to strengthen the federal constitutional court and its functions. In contrast to the US (Trump), there are no plans for a massive reduction/exchange of

administrative staff, but concern about the massive reduction of the staff members by increasing cases of retirement: in local administration about 230.000 until 2030. There is also a paradox: many demands for better public services could imply increasing numbers of staff and more regulation. A recent example is the demand of borderline-controls (against immigration).

5. Polycrises in structures and processes of (local) policy implementation

The complexity and contingency of communication and decision-making is highly visible during the processes of application of public rules and regulations in local task fulfilment. The function of public administration is described as making binding decisions. However, it is influenced and handicapped by complex responsibilities and rules – especially in the horizontal dimension (various policy fields): for the design of policies we often find "negative coordination" between the various ministries (and political parties) – as has been seen lately in Germany with the attempt to acquire contributions to sustainability goals from all departments of the federal government. In the phase of implementation this leads to "misfits" and conflicts. Of course, the complications (crises) increasingly also develop in vertical dimensions (from local to national-, European- and world-level) – altogether leading to ongoing debates about (de-)bureaucratization – a blame-game between politics, public administration, local citizens and science. This situation has general consequences for scientific – especially empirically based – analysis. Today, there are 10.752 communes in Germany. That means: it is almost impossible to formulate findings about "the commune" in Germany. Therefore, the following empirical case descriptions (from NRW) are just selected examples of demands and complications within complex and contingent local/regional communication on behalf of policy *impact*. The research was done 2024 by students of the HSPV[16] (Duisburg) – who have already practical job-experience in the public administration (a type of "duale Ausbildung").

5.1 Immigration/Integration policies and their implementation

This topic was selected for research because it is a complex and contingent policy field and an example for long-term multiple conflicts. Communication about migration takes place on all levels of social systems: from international (UN, EU) to local/interpersonal. This includes rules and decisions/routines on all levels. With regard to a specific society (like Germany) it affects problems of inclusion into many subsystems – not just into a separated "ghetto". This often includes general problems in various communication processes (language, habits,…).which are

[16] Highschool for Police and PA (NRW)

depending on effective arrangements of message, content/information and understanding. As migration and integration under changing conditions (caused by wars, economic disasters, weather disasters, false propaganda by smugglers etc.) have a high dynamic so does the reaction of the PAS: reforms in the context of permanent changes ("changes under the conditions of full speed"). This is especially true for the everyday-demands: the implementation procedures on the local level.

In the federal system of Germany the federal states are responsible for rules and budgets; the counties and their communes have to organize the practical work. As this has to include many aspects of daily living, there is a complex and sometimes also contingent problem-situation to be tackled on behalf of migration and integration: a need for multiple coordination processes. The research interviews concentrated on these issues: earlier forms of guides and coordinating groups were strengthened/substituted by KI ((communal integration centres) and KIM (funding program for communal integration management). The background is the NRW integration-program (goals to be reached until 2030).

Although it is the responsibility of the counties, all of them (54) voluntarily implemented KI – and received funds from the NRW-government. The tasks concentrated on coordination: guidance, access to service organizations, dialogues between groups of local population, language learning, education in general, organization of special events. KIM has focused on inter-communal cooperation and the cooperation between migration- and integration-management; it installed and financed positions for case management, special initiatives for staff-qualifications and on the job training.

The communication-processes, concerning policy-goals and necessary implementation processes, were not very complicated, because they referred to practical problems on the local level. However, the common understanding of the problems does not automatically lead toward a consensus about necessary resources and practical actions: many discussions on the vertical network (ministries; local offices; various voluntary organizations) are taking place. They include controversies with regard to problem-definitions and plans for efficient solutions. The important role of effective communication networks has been described. More specifically: "basic networks" are important for innovative "issue networks". The practical problems can differ between the communes and lead to various forms of local self-government. Therefore, the vertical communication is often concentrated on financial questions (which administrative level should cover which types of expenses?) The local level has to contribute 20% to the available budget. This also

had been discussed in the context of prevailing high levels of local budget—deficits. Therefore, the solidity of financial transfer is critically observed. In general, the vertical communication has been improved within the new policy-frame (KI; KIM): policy making needs knowledge transfer from the implementing actors. Critical comments are most often related to the cooperation (competition) with voluntary organizations on both levels – which are afraid to loose functions and resources in this policy field.

5.2 Environmental protection: a. public transportation-network; b. processes of improving sustainability

These policy-examples refer to a more general set of goals (f. e. SDG2030) and a very broad spectrum of actors and initiatives involved. With regard to public transportation many heterogeneous actors are focussing on different interests and goals. Often mentioned was also the cooperation between various communes with regard to a broad public transportation network. The lack of funds for the management on the state-level leads to more self-organization on the local level. Mutual decision-making and the control by the state level is slow. Therefore, the funds of the state are often not used in a timely manner by local/communal actors. Sometimes, the shortage of staff is mentioned as a background problem.

Much more inclusion of various actors is necessary for the implementation of sustainability goals: politics, PA, economy, science, civil society, NGOs etc. are on the list. Since 2021 the obligation for communal reports about the development of sustainability-standards is established. Since 2023 the presentation of a budget for sustainability activities has to be added. They are financed by the responsible state ministry. Various modes of cooperation and control have been established.

Multiple causal factors, multiple actors, multiple knowledge/experiences are indicators of complicated communication networks (in all directions). The developed plans are often affecting the living conditions of the population. Therefore, protest and lobbyism (of party-politics, economy etc..) are part of it. One of the negative consequences is the “piecemeal” character of many plans and implementation activities. The need for broad information about the SDG2030 and its necessary local implications was formulated very often. More experimenta-tion with practical solutions – for a broad set of problems - was suggested/demanded.

5.3 Implementation processes: dealing with complex and contingent societal conditions

The summary of the empirical observations in NRW are valuable illustrations of the development of crisis-configurations in a society with functional subsystems and necessary/possible ways for practical solutions. The focus on the local level is well founded, because it has to acknowledge the complex interdependencies of inclusion processes – and possibly their crisis potential. An important element of resonance has focused on the sources of knowledge of PA-actors for political debates and decision-making. The latter often is focussing on party positions and parts of the population. PA has to manage the whole set of inclusion processes. Therefore, the need for resonance (or even balancing) within everyday work has been described in detail. The differences between local arrangements ask for variations, efficiency tests, an experimentation clause or "sunset-legislation". The examples have described modes of crisis-transfers and the difficulty to develop a common understanding among actors from different subsystems (law, economy, science, civil society and others). Some actors, therefore, can gain important functions in the communication/coordination-management. This has high importance, if other system-levels are included: national, European, global[17]. This is easier, if the "issue-network" can utilize a "basic network". With such a background it is possible to organize necessary evaluation processes – and the recognition of the jointly use of important findings. However, the problems of complexity and contingency are not eliminated: policy formulation has its own logic in the communication processes: "solutions" have to be sold in simple terms (see the decisions of Trump in the beginning of his regency 2025) and – in the context of the new media systems – very fast: often before the requirements, implications and consequences are well understood – or too complex to be communicated publicly. The result: various forms of blame games: from heavy criticism in the media to an investigative committee (ex post). A good example is the reaction of politics and administration to the outburst of the corona pandemic in Germany. It also leaves the question open, whether this is an occasion for ex post learning for future crisis prevention. In combination with the continuity of criticism of bureaucratic overload this leads us back to the polycrisis and options for breaking its distribution/expansion.

[17] A recent example is the "Lieferkettengesetz" : the application of German rules on all steps of production, transport and delivery of products.

6. Conclusion

The observation of the polycrisis in Germany – as one example among many, worldwide – has illustrated/testified the usefulness of the analytical concept, based on system-theory. The complexity and contingency of societal developments – in a permanently changing world-context – have lead to a functional differentiated society – especially in the "western" context. Basic implications – like the role and difficulty of complex communication-settings (especially in the new media-world) and the demanding processes of an inclusion of the population, and the resonance to the changing natural system-environment, and destructive influences (cyber-war and others) by other (often authoritarian) countries (a. o.) have shown their crisis-potential.

This leads to the question of problem solving, crisis reduction, future-perspectives. Could an increase of resilience be possible? What are the dimensions of possible transformations? How about the inclusion of the population/citizens into the communication about such a complex challenge? The growing support of right-wing (in part anti-democratic) parties indicates a demand for "simple" solutions: Germany first: remigration of immigrants, exit from EU and Euro, dominant presence in "social"-media channels, appeasement to Russia etc. In the situation with new national elections within four weeks, it might be helpful to observe the start of the new Trump-regime in the United States. The first steps (and decrees) show the destruction of a functional differentiated society and the development of a Tech-Oligarchy ("masters of the universe"/Silicon Valley). It is still an open question, whether this is an approach to simple solutions for crisis situations. For the German party-competition on behalf of the coming election, the role of Musk with regard to the DOGE (Department of Government Efficiency) will be of special interest, because many parties pledge for strict "debureaucratization". If this includes a large reduction of staff in PA, it might open new crisis-sectors: it would enlarge the existing lack of service staff – which is already continuously augmented by retiring persons.

These observations can be summarized in two questions with regard to crises-management in the future. Can the functional differentiation be kept and made more efficient – or is a path towards a kind of dictatorship unavoidable? This question about the future of "the elephant" should be combined with the more specific topic: how can PA be enabled to reduce causes for the development of polycrisis?

The options for the first issue have been described in the sense of a necessary valuation of all functional subsystems and their *indispensable* contributions for the societal development. As described above, this also demands for mutual resonance and balancing mechanisms – i.e. communication across system-borders. This also asks for a consensus about the definition of performance-standards and their regular and solid evaluation and documentation. This has to include the evaluation of inclusion standards with regard to the citizens: how about fairness with regard to living standards? These issues have always to include the definition of necessary contributions (changes, reserves) in/for the future - for example as an implication of demographic developments. If *indispensable* contributions are – not at least because of their complexity - depending on international cooperation, these dependencies should be either reduced or integrated into international networks with similar societal (democratic, liberal, human) arrangements (like the EU). This should help to avoid dependencies on dictatorial systems – and all kinds of attacks against the arrangements of "the elephant". Arrangements with regard to not indispensable contributions could be more flexible: water and whiskey can be used as an example for this differentiation.

A high level of indispensable contributions to crises-management is expected from the German public sector: politics, public administration and law – and their representation/inclusion of the citizens. As described above, this is intensified by the role of these subsystems in the process of balancing various subsystems, which might include the shifts between functions and the provision of (public) resources. As it was described in the few empirical cases, these responsibilities are very demanding and under permanent critics. The structural background is the federal architecture of the German government – a consequence of the lost second world war. A comparison with France shows the specifics: the division between 16 federal states, 294 counties with 11.000 communes (including 2.056 cities). Political majorities and many other factors constitute a high level of variation/differences in almost all public tasks (policy fields). This is one important reason for various "blame-games" between the levels – and between politics and PA. It is not surprising, that "too much bureaucracy" is a key topic in the actual election campaigns. The research about bureaucratization and de-bureaucratization is (since decades) an almost "empty signifier" - which always gets applause. Therefore it is necessary to describe more precisely its contents and the relations to crises-accumulation.

In the empirical cases and in many public debates a deficiency of political understanding of implementation-processes and their problems (and crisis-potential) is visible. Whereas politics is input-orientated, local PA is outcome-

/impact—oriented. Therefore a better exchange of knowledge or evaluation-results (administrative science) is necessary. This is a complicated and often time--consuming process. It leads to increasing challenges, produced by the "new" media-systems. There have been many cases in Germany, where new policies were presented and criticized before the consultations about implementation-details were completed: a disaster for the policy but also for the government. In times of coming elections this is also a typical content of party-programs: there are goals defined which cannot be reached – because the complex context is not understood or contingent. There is a typical comment in German media: "everybody who argues with facts will loose (elections)".

Often, the same is true for the implementation process and the evaluation of its effects: very often, it is just communication on the basis of speculation. Although there is a common slogan – "afterwards you know more" , these situations are used for "blame-games". They are not just problematic cases of policy implementation but signs of a permanent capturing of politics and PA by the media system. The general proposition for this type of occasions is the necessity to develop "stop rules" within the respective subsystem. However, the attempts for national and international regulations (like the DSA in the EU) failed quite often. This will become even more typical with the expansion of the US-Tech-Oligarchy. Under these complicated conditions of communication, the improvement of mutual resonance between politics and PA (and citizens) should take place without permanent media-observation. Within the complex and contingent implementation processes changes are necessary and complicated, because they are producing irritations also for other subsystems. Therefore, the reduction of complexity (rules, responsibilities, organizational arrangements, impact on citizens, networks…) should always be a (background-) topic. However, two conflicting points of orientation have to be kept in mind: a. less bureaucracy – more corruption; b. more bureaucratic infrastructure – more strength of political authority (Janus-head). As the services of PA often have a monopolistic position or even power for binding decisions it is important to include groups of citizens (beyond the elections) into the discussions about reform-options in the public sector. However, this must be based on a basic understanding of the "whole elephant". A participation of scientific observers and consultants could enhance and improve the mutual resonance between the respective subsystems and help to avoid an increase of "blame-games" in the battle of PA against future crises.