



## On Future Education: The Learning Organization (Peter Senge, 1990) Versus the Administrative Organization

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**Abstract:** The recent nose-diving education results in the P.I.S.A.-assessments, have formed a painful reminder for many countries of the importance of education for a nation's economy and for the welfare of its inhabitants. The historical influences on the development of education systems, of the 'Information Processing Approach' and of the 'Administrative Principles' approach in business administration, are discussed in the present commentary. Together with an increased impact of the availability of ICT (especially after the COVID19-pandemic) and of the modus operandi of social network platforms, these developments appear to be important determinants of the present state of education systems in developed countries. In contrast to the dominant paradigm of Administrative Organization, the paradigm of the Learning Organization (Peter Senge, 1990) is found instructive. However, the global interconnectedness, the overwhelming increase in peer-pressure on social media and resulting risk of polarization, form an ever-growing challenge for the education of children and adolescents, and in particular for the professional group that is dedicated to their education.

### 1. INTRODUCTION AND HISTORY

During the preceding year(s), and in the first months of 2023 in particular, an often heard remark was that the World had arrived at a complicated crossing, as a figure of speech. The leaders of the G7 countries and the global blocks were travelling across the world, one after the other, to consult, deliberate and discuss their diplomatic, economic and strategic interests. Regardless of the direction our World will be choosing beyond this 'crossing', if there will be a World to take care off, then there will be children to educate too! So, the starting point of the present study is the question how future education has to be conceived on a global scale, or, as an opposing viewpoint, whether education is better managed at a limited regional scale?

The contrasts between the prevailing discourses and practices that were propagated in the nineties, for instance in the footsteps of Peter Senge's *Fifth Discipline* (1990)<sup>(1)</sup>, and the contemporary, post-millennial discourses are striking. In this paper we investigate the influencing role of the *Information Processing Approach* (IPA) (of cognitive psychology) following the pioneering publication on *Human Problem Solving* by Allen Newell and Herbert Simon <sup>(2)</sup>. But also the 'Administrative Principles' approach to (business) management, going back as far as the pioneering role of Mary Parker Follett (1868-1933), was recently re-discovered by corporate America <sup>(3)</sup>. Whereas Senge's strategy (of the Learning Organization) ensues from the realm of company learning and management strategies (for example see Davenport, 1998)<sup>(4)</sup>, the latter clearly results from information technology and the digitalization of business and commerce. How this IPA happened to spill over from the world of finance and company management to the education systems, and moreover, how education is altered by this spill-over, is subject of the next paragraph (see 2. New incentives in the Netherlands and global trends).

The origin of the IPA has to be excavated from the rise of *Cognitive Psychology*, as early as in the nineteenth-twentieth century, with the work of the American psychologist E.L. Thorndike (1874-1949). Thorndike became famous after his legacy: "his theory was his hammer; he looked around and saw the arithmetic curriculum as something to pound" <sup>(5)</sup>. The easiest way to continue Thorndike's story is to say: "the rest is history!". The question of the arithmetic curriculum in primary and secondary education has been a subject of debate for decades now, in the Anglo-Saxon speaking

countries as well as in the Netherlands. But we'd rather refer to other sources (see references in <sup>5</sup>) for evaluating the history of mathematics education. In this paper we try to elucidate another question, namely how choices made in establishing a curriculum for education mirrors the political ambitions of a nation or mirrors the differences in worldview, which is becoming increasingly problematic these days, let alone the arithmetic and other skills of the children of tomorrow.

When looking at any glossy magazine about education, we may (not) be surprised by the cheerful and optimistic outlook of the pictures in these magazines. They show happy, delightful children, just like we wish to see them, if not perturbed by the propagandistic framing. And when we go back to our memories of our own childhood, we would probably all remember how that looked like: very differently, and probably less delightful. Many public figures of the national media, famous in their own country, are not ashamed to admit, sometimes at a notorious stage such as during a TED-lecture, that they haven't learned much of value at secondary school (or before), so why not completely revise or reform it, or start all over from scratch?

Similar remarks – although not during a TED lecture or contemporary media event - were made by the famous American writer and iconoclast Henry David Thoreau (1817-1862), author of illustrious works like *Civil Disobedience* (1849) and *Walden* (1854)<sup>(6)</sup>. *Walden* was the place in the woods, 'far from the madding crowd'<sup>(7)</sup>, where Thoreau lived in retirement at the end of his life. Not many readers may remember that Thoreau's book *Walden* <sup>(6)</sup> became an inspiration to one of the most ferocious followers of Thorndike's hammer methodology in education (see above), namely in Burrhus F. Skinner's (1904-1990) novel *Walden Two* (1948). According to Charlotte Thomson Iserbyt (1930-2022)<sup>(\*)1</sup>, in her book "the deliberate dumbing down of america"<sup>(8)</sup>, Skinner recommended, amongst other radical things "that children be reared by the state, to be trained from birth to demonstrate only desirable characteristics and behavior"<sup>(\*)2</sup>. In fact, Skinner remarks about 'rearing children by the state and being separated from their parents' are merely half as radical compared to Plato's writings about 'education, marrying and having children' in *The Republic* (around 375 BC), not to mention the horrible imitations of this ideology in the previous centuries and even today<sup>(\*)3</sup>.

Current opinion believes Plato's ideas on education should be rather seen as an exercise in philosophy, not to be carried out in 'real life'. Skinner's publications, however, following his philosophical exercising in *Walden Two* (1948), became the new vogue in cognitive psychology, in the footsteps of Thorndike, Wilhelm Wundt (1832-1920) and John Dewey (1859-1952). Skinner's ground-breaking methodology is best known for his animal-experimental psychological approach of 'Operant conditioning' <sup>(9)</sup>, which in fact was a fulfillment of Wundt's ambitions to experiment with *outcome-based education* (OBE). But also he aimed at establishing a 'progressive', experimental education framework, following the experimental methods developed by another scientist of the pre-war Leipzig era, doctor Ivan P. Pavlov (1849-1936)<sup>(8)</sup>. And, of course, Pavlov became best known for the 'Pavlov responses' of his dogs and pigeons, not children, of course.

So, writing about alternatives for an education system, in the past hasn't been without risk, most of all the risk of a derailed imitation. The current developments in education policy, the political emphasis on national education goals and the global political developments altogether, and, not in the least, the extremely fast technological advancements in informatics, social networking and artificial intelligence (AI), to my opinion, urge for a thorough examination of the difficult entanglements education systems are facing with.

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<sup>(\*)1</sup> C.T. Iserbyt was an American conservative writer and former senior advisor of the US Department of Education during the Reagan administration (1981-1989). She had to leave office after having leaked information from a document of the U.S. Department of Education (regarding the *B.E.S.T. Project*, an acronym for Better Education Skills through Technology) to the political website *Human Events* (Source: Wikipedia.org) (accessed: 21-04-23).

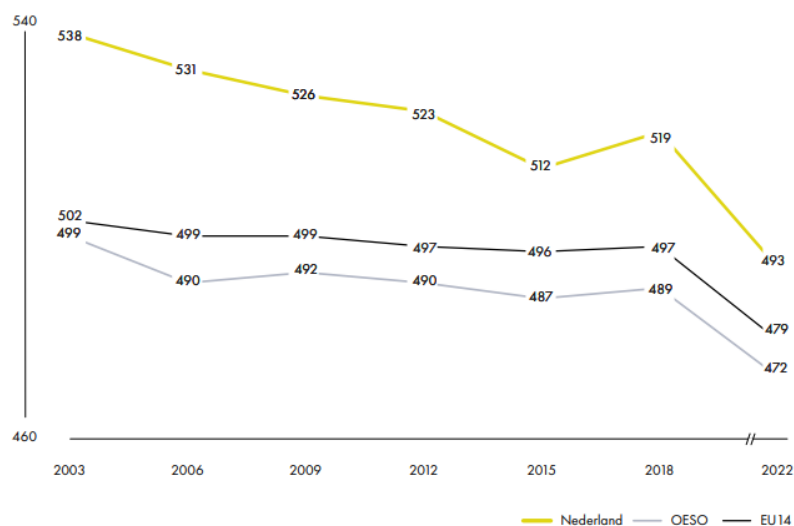
<sup>(\*)2</sup> C.T. Iserbyt (2011), p. 45.

<sup>(\*)3</sup> See also the Documentary "Plato School" [in Dutch] picturing the rise and fall of the Amsterdam education 'experiment' (1983-1996), a BNNVARA production directed by Yara Hannema (2023). The origin of the Plato School was in the Amsterdam *School of Philosophy*. The experiment found a lot of criticism, for two main reasons: the over-emphasis on discipline and the old-fashioned punishment culture (even up to physical punishment). The case was settled and financial penalties were imposed on 3 teachers (closure in 1996).

## 2. NEW INCENTIVES IN THE NETHERLANDS AND GLOBAL TRENDS

It is a legitimate question to ask when and where the idea was raised, if and how education systems could be considered as an enterprise, a business model (for the national economy). The answer(s) to this multi-faceted question, however, is (are) very difficult to give or to pin down on an actual place and moment in the past. It became a hype though, during the period that higher education systems found out that growth was best achieved by merging smaller schools (in cities and in provincial towns) into bigger institutes and even larger conglomerates. In personal communications of financial & legal consultants, in the nineties and with generation-Z, it appeared to be very easy and lucrative for consultants to advise and to move high school boards into a fusion. The increasing scale of these conglomerates would make it very difficult for the stand-alone institutions to survive the fierce competition. Although the ‘free fall’ of education results as revealed by the *P.I.S.A.* assessments (Fig. 1) <sup>(10)</sup>, already in 2015 prompted the education minister of the Netherlands, M. (Jet) Bussemaker (°1961, Capelle a/d IJssel, the Netherlands; social democrats), to plea for splitting up of the largest conglomerates, no such thing happened <sup>(11)</sup>. The union of mbo-schools drubbed the initiative before it reached parliament (as a bill)<sup>(11)</sup>.

Also in Belgium, the drastic fall of education results since the first P.I.S.A. assessments puzzled the public opinion and formed an embarrassment for successive legislations. Most intriguing however, is the observation that political parties from either side try to blame the other side for the nose-diving outcome. Right-wing representatives, on the one hand, blame the leftist teachers for spoiling the children and for paying too much attention to the child’s well-being. Politicians of the left side, on the other hand, blame the ruling (liberal) parties, for not making available the sufficient means for an inclusive integration of mostly foreign language speaking children (with an immigration background, or otherwise). But in either case, the common opinion believes that the teachers have to solve the problem of bad learning results. But what about the role or the impact of mobile telephones (24/7 at hand for many children, if not for most of them, not only in the class room) and other digital devices on the learning process?



**Fig1.** Trend in mathematics scores as revealed by the successive P.I.S.A.-assessments for the Netherlands (green), compared with an average of 14 EU countries (plus UK) and an average of the participating OESO countries (light blue)(© 2023 – PISA 2022 data).

The increasing role of digitalization processes in education (as in the rest of society) and the advance of digital devices made available to, or bought by the parents for the pupils, already started well before the dreadful corona years (2020-2022). The successive lockdowns resulting from the pandemic <sup>(12, 13)</sup>, however, where an exquisite opportunity for the providers of tele-network tools and ICT-devices to roll out their products over the education landscape. After the pandemic, many would agree on the beneficial role of school openings on the well-being of both children and their parents, and that ‘real’ person-to-person-education in the class room had many advantages over watching a computer screen. The instruments, devices and teleworking tools, however, didn’t disappear from the school

ground after the period of forced social distancing came to an end. In 2023, shortly before the fall of the administration of Rutte IV, the Minister of Education Robbert Dijkgraaf (°1960, Ridderkerk, the Netherlands; (liberal) Democrats 66) proposed a directive to ban the use of cell phones from the class rooms, because they are considered very disturbing and detrimental to the learning process. However, the minister considered it not necessary to pass a bill, because “parents, schools and pupils would comply with the directive, without the need for a legal prohibition”<sup>(14)</sup>. At least, that was the message brought in the media.

The strengthening of the impact of the digital packages on the school ground, however, was a direct result of a number of serious hacking incidents, where enormous amounts of ransom money were frequently extorted from large education institutes by unknown perpetrators<sup>(15)</sup>. How much they were forced to pay was not disclosed to the public. The use of ransom ware became a plague to many of the secondary and high school organizations. Therefore, they were advised to augment the cyber security of their digital platforms, using dual authentication and strict access procedures, a trend that was well anticipated by the successive modifications of the Microsoft and Apple platforms (such as the *Windows NT* family of programs, *Windows 10*, launched in 2015, *Windows 11*, launched in 2021, etc.). Already in a famous interview with CNN<sup>(16)</sup>, former Microsoft CEO (until June 2008) and founder Bill Gates (°1955, Seattle) “thanked the Education System and Judicial System that enabled him to gain his fortune”<sup>(17)</sup>. In the same year 2008, Microsoft (MS) was condemned (over the disclosure verdict of the MS source codes) by the European Commission to a 1,4 billion US dollar fine, the highest penalty ever imposed on an enterprise operating in Europe<sup>(17)</sup>.

However, the present, secured digital platforms of MS, Apple and the like, have largely supported the implementation of the administrative organization principles in the school ICT and organization charts, with no other psychological, pedagogical or philosophical underpinning than the security and defense measures of the large school organizations against ransom ware and other cybercrimes. The adoption of the administrative organization principles thus fell from the sky as a security obligation.

The fact that most large organizations in a great part of the world were using the Microsoft (or Apple) system(s), enabled a worldwide control of content processing, a trend in fact pioneered by the founders of Google, Sergey Brin (°1973, Moscow, moved to USA in 1980) and Larry Page (°1973, Lansing, Michigan)<sup>(18)</sup>. Also Google was confronted with the European Commission to pay a €2.42 billion fine for breaching EU antitrust rules (since 2008). It was concluded that Google’s practice amounted to an abuse of its dominant position in general internet search, thereby “stifling competition in comparison shopping markets.” To be more precise, the commission decision did not “object to the design of Google’s generic search algorithms or to demotions as such (i.e. lowering a search entry’s rank in Google’s search results)”(...)<sup>(19)</sup>. As a result, the consumers were seeing rival comparisons on average much lower in the list of search results, or only very rarely! This principle of “comparison shopping” was bringing an illegal advantage to the Google’s search practice and was therefore condemned by the European Commission (EC)<sup>(19)</sup>. Moreover, also a new principle was introduced by the practice of Google, namely that the value of information was defined by the determinants in Google’s search algorithms. European initiatives like these supported by the Dutch *Foundation Defend Democracy*<sup>(20)</sup>, even stated that the search algorithms were not what they once pretended to be, namely a search engine for finding ‘objective’ sources of information, but rather a lucrative business model for the profit of the Big Tech companies. Finally, the monopolization of something as precious as the availability of information, was regarded a serious violation of the (neo) liberal market economy<sup>(\*4)</sup>. At this very moment, the EC is preparing new regulations to counteract the habit-forming algorithms that have a profound and addictive impact on the time spent on mobile phones, indeed a very recognizable habit.

### **3. THE DEVELOPMENT OF STRUCTURING OF ORGANIZATIONS**

When talking to renowned scientists of prominent research institutes in the Netherlands, such as the Netherlands Cancer Institute and others, it stroke me that much emphasis was given to a so-called ‘flat’ type of organization, allowing the young PhD students to exercise their academic responsibility

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(\*4) The analogy with Microsoft taking over control of software of third origin that is allowed on their platforms, the quick rise of AI-modules that are implemented on all of their platforms and that – although not solicited – cannot be removed from the operating system, is a topic of ongoing concern. However, for reasons of manageability it will be left out from the present paper.



and freedom as much as possible <sup>(21)</sup>. It became evident, however, that such an academic freedom or self-steering professional status, as promoted by the principles of the ‘learning organization’ (see 4. A nostalgic retrospect on the Learning Organization (Peter Senge, 1990)), was largely absent from most of the primary, secondary and other, so-called ‘lower’ high school organizations. The hierarchical, top-down organization of the larger school networks (either with a religious, catholic or protestant inclination or laicized state education) reflected and appeared deeply rooted in the historical backgrounds of these religious and/or ideological systems <sup>(22, 23, 24)</sup>.

The latter type(s) of organization, however, appear(s) to be much in contrast with the developments seen in the organization of management and the structuring of decision-making in industry and business <sup>(25, 26, 27)</sup>. The older of these organization structures, the typical *line organization*, based on principles of scientific administration <sup>(27)</sup>, is what in education systems still prevails to date (**Fig. 2**). More modern forms of management, such as the *functional organization* <sup>(26)</sup> and *loosely coupled systems* <sup>(25)</sup>, such as developed in business organization, hardly found any follow-up in the main education systems.

From the historically rooted education systems on the European continent to the education developments in the Far East, the similarity in problems, challenges and responses of the teachers group recently became apparent. For instance in South Korea where, after a number of suicide cases among young Korean teachers, the colleague teachers rallied to demand for their rights <sup>(28)</sup>. Parent pressure was called an important cause of the young teacher’s grievances <sup>(28)</sup>. But, how do these parents figure in the hierarchical school organization? In fact, parents are *not* part of the organization, but since a fierce competition exists among schools for attracting children and the number of children is directly linked to the school finances, they are often considered a major player in the school’s decision-making process. Accountability, (digital) registration and securing all interactions with children, as well as the individual coaching (of children), became mandatory tasks on top of the pedagogical process. Comparing with our colleagues overseas <sup>(29)</sup>, it appeared that in the Anglo-Saxon education systems, this trend of an increasing load of administration tasks preceded similar developments on the European continent and elsewhere. The successive high scores of Asian countries in the *P.I.S.A.-assessments* (such as in Singapore, Hong Kong, Japan and also in Korea) – exceeding the European scores and of most other OESO countries – does not detract from the global trend of increasing hardship among the teachers populations, both in the East and in the West.

Rallying teachers have been a phenomenon in the West too, for a number of reasons: (too low) wages, parent pressure, (too high) work load, lack of career perspectives, etcetera. One may wonder whether or not the fact of teachers rallying on the streets to demand for their rights <sup>(28)</sup>, in fact confirms their moderate (or absent) impact on the decision-making process. Probably everyone in these developed societies considers himself an expert with respect to education, but a great number of them prefer not to be reminded of that phase in their lives. Still, everyone has an opinion about how education should be transformed or eventually restored toward its presumed state of previous times.

Teacher strikes may be the last thing to do in a society where education is already a much challenged sector, because of a wide-spread demographic evolution and the resulting lack of qualified teachers. Therefore, the comparison with the principles of the ‘learning organization’, although somewhat ‘nostalgic’, merits our attention.

#### **4. A NOSTALGIC RETROSPECT ON THE LEARNING ORGANIZATION (PETER SENGE, 1990)**

The risks of implementing the principles of administrative organization leading to abusive practices in an authoritarian education system are not imaginary. A clear parallel can be drawn between the centralization of power in the platforms of social media, when it came to the point that historic images of past war zones <sup>(30)</sup>, as well as explicit nude images in the art of painting, were all to be banned by the ‘cleaners’ of certain platforms <sup>(31)</sup>. One may wonder, given the popularity of certain activist groups (such as Extinction Rebellion) and the selective attention for these groups in the contemporary public media of the Netherlands, how education is going to look like if the philosophy and especially the *modus operandi* of these activist groups would become the mandatory, ruling paradigm in a top-down education system (in the future)? Would the children then be taught to destroy works of art in the public domain too? Fortunately, teachers of today are creative enough to transform a slogan into a more appropriate way of working with children. Namely, a top-down education is not necessarily

interpreted as ‘following the orders’ (from the head of school, the institute’s board, the inspection or from the minister of education), but as a way of ‘passing the instructions’ from teacher to pupil<sup>(32)</sup>. Or, authoritarian leadership is easily replaced by a different noun, namely authoritative leadership, it is said, in order to inspire rather than to force into compliance<sup>(33)</sup>.

When Peter M. Senge introduced his book *The Fifth Discipline* (...) (1990)<sup>(1)</sup>, a ‘path breaking book’ on how learning strategies could help to overcome all sorts of inherent obstacles and to ‘pinpoint the threats that face them’, the method was essentially proposed to create a competitive advantage to a new generation of companies. Technological businesses, based on exploiting the new so-called ‘knowledge economy’, were rising with the promised expansive opportunities of the internet in the late nineties<sup>(34)</sup>. The ‘learning organization’ presented then, however, was not invented on the school grounds of mainstream education networks. Anti-authoritarian leadership had found access to western schools already much earlier, and in particular in the wake of the ‘golden sixties’, although it took several decades before also an anti-racist, anti-authoritarian pedagogy was awoken<sup>(35)</sup>. One important pedagogical principle of the learning organization, namely the autonomy and self-steering of a group of professionals<sup>(4)</sup>, was found conflicting with the top-down culture in the organizations of the traditional networks of mainstream education. This uprising against traditional education networks, in fact was seen many times before, both in the history of education (like in the Steiner, the Plato, the Montessorian school system, and others) (see below and also footnote \*<sup>3</sup>), as in the various uprisings of religious and philosophical schisms and disruptions in the preceding eras. It would be interesting to dwell on the psychological, developmental and philosophical grounds of for instance developed by Rudolf Steiner (1861-1925), Maria Montessori (1870-1952), Helen Parkhurst (1887-1973), founder of the Dalton plan school system, and the influential cues they took from inspiring developmental psychologists and reformers, such as Jean Piaget (1896-1980) and John Dewey (1859-1952), to understand the divergent reasons for starting a new education system. However, such systematic review would reach beyond the scope of the present paper.

Also an interesting cue is found in the logistic drive of the successive disruptive philosophies and educational reforms. Similar to the development in business organization, where the perception of too long communication lines between board of directors, staff members and the workers at production floors has led to intermediate management levels (like pooled interdependence groupings and so-called *passerelles* for direct exchange) (Fig. 2)<sup>(36)</sup>, educational reforms led to shortening of the communication lines too. This was seen in initiatives like peer review with group members, self-steering and independence of local school communities with a shared philosophy.

Fortunately, in the population of school teachers there is a deep awareness that the primary process taking place in education, and which is also a condition *sine qua non* for the learning process of the children, is the ‘direct’ interaction between the teachers and pupils. The importance of this interaction is illustrated, although we may now consider the nature of the algorithms to hook onto social media platforms as hardly ‘benign’, by the fact that the Big Tech companies have put such an effort in creating mechanism and algorithms enforcing and enhancing the addictive behavior among the youngest (and also the somewhat more gown-up) users of these platforms<sup>(37)</sup>.

One may disagree about the pedagogical, psycho-social or ethological connotations of the word ‘direct’ in (instructive) education, which is also subject to the cultural developments in a certain geographical area<sup>(38)</sup>. The profession of teacher is not the proverbial oldest profession of the planet, but it has an impressive, several-millennium record (since the Greek, pre-Socratic era) upon which we may look back! Even the former Queen Beatrix of the Netherlands, agreed that the “quality of an education system cannot exceed the quality of its teachers”<sup>(39)</sup>. Of course, the secondary processes, that obviously are auxiliary to the primary process, such as the housing, warming, a proper ventilation (an outcome of the corona pandemic), the logistics of ICT and everything else, and, not in the least, the financial administration of salaries, are also very important. Rumor tells that in certain countries – not listed - teachers should also be very patient and ready to work while waiting till they might eventually get paid for all that. School directors might bring up that they have a very cumbersome job too, especially when parents become too demanding and pressing for individualistic favoritism<sup>(40)</sup>. But, finally it is the group of teachers that have to solve all situations in the class room and iron out eventual inequalities. For, that’s what education is really about, or should be: creating equal opportunities for all, although this may be far from reality, for instance according to Michael J. Sandel<sup>(40)</sup>.

The idea of school directors taking care of all logistic matters is also contradicted by witnesses of many teachers in biology, physics and chemistry. It is rather experienced as a logistic support on paper – or from behind the computer desk – and not the real logistic preparations, such as needed for natural science demonstration and experimentation. The experimental and practical work rests on their shoulders, a much forgotten fact in the world of governors and academic decision makers (\*<sup>5</sup>).

## **5. EDUCATION AND THE ILLUSION OF UNIFORMITY**

*“The evenenimization of, year after year, upholding the doctrine that scientific failures or mistakes against common accepted knowledge are to be preferred, above the disobedience of the centrally decided, mistaken answers of the State Exams, cannot be without consequences for the moral consciousness of an entire generation of scientifically trained professionals. Therefore, central exams are a mistake and central-state dogmatism is opium for the education of a nation.”* (Cry of the heart of an education reformer)

It has been suggested, at every occasion when a think tank was busy preparing a major educational reform, that every attempt to create a thorough reform of the curriculum is hampered by the practice and long-term expected results demanded by something like State Exams. These form a particular, yearly event in the Netherlands, allowing for creating uniformity standards and long-term consistency of education results (at the end of their secondary school). But, in order to do that, also internal controls are needed. In Germany, passing the state examination is required for certain careers as public servants (e.g. teachers), and, students can only take their state examination after having completed their practice program (as a Master of Education or similar)<sup>(41)</sup>. Also in Belgium, certain politicians and academics are eagerly pushing public opinion <sup>(42)</sup>, following the promises of the Belgian minister of education Ben Weyts (°1970, Leuven, N-VA), in order to have a central state exam installed (\*<sup>6</sup>). For a progressive educational reformist, it would be understandable to strongly dissuade from swimming into that fish-trap of an (allegedly) fixed quality control.

Moreover, national quality institutes like the Education Inspection in the Netherlands impose quality standards, such as the yearly success rates and the maximum cohort sizes of pupils exceeding the average duration or school passage time. If schools cannot provide a certain productivity, then a stricter surveillance program may be imposed. Although a motion in the house of parliament <sup>(43)</sup> demanded the prohibition of interference of these quality institutes with the pedagogical content and freedom of education of the different school systems, this prohibition in fact was circumvented by imposing quantitative criteria to the schools, in combination with the ‘fixed’ standards of the State Exams. Making the schools accountable for the effectivity, passage time and output of the education process, in the end results in ‘content control’ too, albeit in a more abstract, detached form. Beside the productivity and cost efficiency of the education programs, the Education Inspection is most interested in consolidation of the quality standards into the school procedures. Theories (or beliefs) that are considered unscientific by many scientists, like creationism, intelligent design, etc., can still be discussed in the class room as if they were a part of the biology curriculum <sup>(44)</sup>, but too long passage times of the young adolescents, etc. are considered not admissible.

The latter emphasis on ‘consolidation of school results’ implicates a stronger emphasis on administrative organization instead of on the interaction between teacher and pupil. In everyday practice this implicates that the (digitalized) verbalization of the interaction between teacher and pupil is considered more important (for the school board and inspection) than the pedagogical interaction itself. Consequently, teachers lose their selves in endless administration and registration tasks, or, education becomes bureaucracy at its most extreme, senseless manifestation. And so it was also heard in the outcries of the South Korean teachers (see 3. The development of structuring of organizations).

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(\*<sup>5</sup>) This reminds me of the widespread distaste for the logistics and technical operational details of scientific experimentation among the top ranks of Dutch academics, in contrast to my previous experiences. “You have technical operators for that, don’t bother us with the details”, was a much heard opinion!

(\*<sup>6</sup>) The new proposal is aiming at forefront selection of candidates (granting access to university), other than the traditional ‘maturity’ tests (for higher education) that used to be performed by secondary schools at their own choice.

Finally, the administrative organization of the education process is not supportive for a personal and differentiated approach of young adolescents. We may agree that society doesn't need a flood of self-similar, impersonal, uninspired 'yes-men', as the philosopher Paul Tillich (1886-1965) once said to an audience of graduates in the postwar generation: "We hope for nonconformists among you, for your sake, for the sake of the nation, for the sake of humanity"<sup>(45)</sup>. But this may look easier in theory, than it is achievable in practice. The heterogeneity of the student group, the differences in cultural or ethnic background, differences in learning capacities or assimilation speed, together with too large groups of pupils (or too few teachers) make a personal, differentiated approach cumbersome, if not impossible.

But the most flagrant transgressions are observed in countries where children from ethnic minorities are literally removed from their parents and ethnic background, and forced to abandon their mother tongue and the culture of their roots. This happened in the previous centuries with the Sami [*Sámeigiella*] in Sweden (a group of some 60000 people, of which 17000 live in Sweden, 35000 in Norway), before the law of 2000 ensured their rights<sup>(46)</sup>, as well as with the 150000 children from indigenous communities across Canada that were forcibly taken from their parents<sup>(47)</sup>. Not only the physical and sexual abuse of the indigenous children at an unimaginable scale, even the death and hiding of the vast number of children in unmarked graves, recall the horror of similar, historically documented genocides<sup>(47)</sup>. More recently, the abduction of more than 2300 Ukrainian children from the Donetsk and Luhansk Oblasts during the Russian invasion of Ukraine<sup>(48)</sup>, document the vulnerability of the children at a global scale, and stress the importance of the issue. But also at a more modest scale or more subtle manner, minorities are oppressed and refused their principal human rights. For instance the fact that the Flemish language, in contrast to the Frisian (*Frysk*) language, is not considered an independent language of the Dutch language group (but only a regional dialect)<sup>(49)</sup>, may be an important reminder for some of the Flemish political forefront runners: namely that annexation of the northern provinces of Belgium into a bigger Dutch-speaking hegemony, would not be a very smart idea. Becoming part of the French-speaking hegemony (or German-speaking) wouldn't be a better idea either, as five centuries of Belgian history have revealed: the territories have been a battlefield for their neighbors for a period long enough to appreciate the concept of 'federalism'.

Every attempt to create uniformity of output appears to have an opposite effect: the uprise of opposition against the imposed, egalitarian shackles. Sooner or later, a person may discover the importance of cultural and/or ethnic background in developing the awareness or consciousness of self-identity. This is confirmed by studies devoted to the mental health of adolescents that were adopted during their infancy<sup>(50)</sup>.

Heterogeneity is not only relevant for developing a cultural awareness, it is rooted in the genetical diversity generating mechanism of reproduction. It is even part of the biological mechanism of mate selection, at least in the own species. Evidence has shown a negative effect of self-similarity in partner recognition by odorous signaling, a natural selection mechanism that presumably evolved to prevent combinations that are genetically too close and therefore biologically unfavorable<sup>(51)</sup>. Still, ideologies, national education programs and social pressure – in particular the pressure organized by the largest platforms (including the newest AI propagandists)<sup>(\*)</sup> – all form a huge counterforce tending to the obliteration of individual differences. At a scale of the established nation states<sup>(\*)</sup><sup>(52)</sup>,

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<sup>(\*)</sup> The news that Sam Altman, CEO and co-founder Greg Brockman left OpenAI and were announced to be joining Microsoft's new advanced AI research team (*EuroNews*, TV channel, 20-11-2023), illustrate the big economic and financial interests in AI of the Big Tech companies. Let's not be mistaken about the future of AI: it will be a business model, just like the search engines and social media platforms appeared to be! AI will most probably increase the returns on investment of their financial stakeholders. It is not invented to improve the self-sufficient learning capacities of children worldwide, nor to improve education effectiveness. This comes at a moment when also reading and writing skills have accelerated a downward dive in the global *P.I.S.A.-assessments*.

<sup>(\*)</sup> Friedrich Nietzsche (1844-1900) went further in his cynical name calling of the State as 'die fressende Fackel des Menschengeschlechts' and an answer to the 'blinde und egoistische Masse', here translated from German: "The State, of scornful descent, for most of the people a continuously flowing source of sorrow, with frequently recurrent intervals the eating torch of the human race – and therefore a call, at which we forget



this counterforce obtained the name of ‘nationalism’. The connotation is called negative, because it was designated as the force that drove Europe into World War I and II during the preceding century. On the other hand, it is also the force that subsisted the origin, the legitimacy and recognition of these very nation states.

#### **6. THE ‘THIRD POLE’ ARGUMENT (EMMANUEL MACRON, 2023) AND A ONE WORLD POLICY**

Whatever this ‘scornful descent’ of a state may be (\*<sup>8</sup>), inherited from a monarch or from feudal vassalage, or baptized in the blood of conquest or of an armed revolution, the states claim to defend the cultural heritage and national integrity of its territories, often as their constitutional right and duty. This however becomes problematic at two opposing fronts, on the one hand the cultural, linguistic or ethnic heterogeneity of the population, at the other hand with regard to the different loyalties of these groups with respect to the adherence to supranational alliances. As mentioned earlier, ‘federalism’ has been proven successful in a number of well-known cases (Switzerland, Germany, and, hopefully, also in Belgium), but examples of the opposite are easily found too.

The consolidation of supranational alliances (military, economical or culture-historical), however, more and more seems to become a matter of serious concern. This was overtly demonstrated by the controversial media attention for the viewpoints of the French president Emmanuel Macron (° 1977, Amiens) at the occasion of the state visit to the People’s Republic of China (<sup>53</sup>). According to the British magazine, *The Observer*, Macron’s statements that “being an ally doesn’t mean being a vassal...” and his plead for European ‘strategic autonomy’ has raised a lot of criticism from all sides. Not only the right-wing hardliner’s claim that Macron’s position would weaken the western alliance and play into China’s hand, but also the British skepticism (and from other European allies as well) of an over-emphasized role of French diplomacy (pretending of playing Europe’s leading role) and Europe’s ludicrous failure to drive a wedge between China and Russia, are loudly proclaimed. But the alleged belittlement – according to *The Observer* - of the Taiwan problem by Macron, a heritage of the Henry Kissinger (1923-2023) détente with the People’s Republic of Mao Zhe Dong (1893-1976), forms an interesting angle. Not only because of the French colonial history with Taiwan (and the short-lived Republic of Formosa, conquered by Japan in 1895), but also because of the preservation in Taiwan’s capital Taipei (and elsewhere on the island) of many objects, art works and documents from an ancient cultural, Chinese heritage, preserved from the outbursts of Mao’s Cultural Revolution in mainland China (1966-1976).

The preservation of the cultural heritage (including language) and the autonomy of the indigenous populations, is often a matter of concern, especially when regional differences become subsidiary to larger continental, supra-national or peninsular, global political interests. In the Chinese territories not only Mandarin, but also Cantonese, Hunanese and a number of dialects are spoken. Protecting cultural heritage and heterogeneity of background, including language differences, therefore is not in harmony with too strong central state control of education and cultural development.

The commentaries on Macron’s diplomatic escape, touch upon the widespread fear for a world dominated by China’s economic, military and political rule (<sup>54</sup>) (Fig. 3). An often coined name for this phenomenon is the ‘Middle Kingdom Syndrome’, referring to the ancient Chinese world view as allegedly expressed in the *Yugong*, a chapter of the *Shujing (Classic of History)*(\*<sup>9</sup>). It may also refer

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ourselves, a cry for blood, which incites to many, truly heroic deeds, however, perhaps the highest and noblest object for the blind and egoistic masses, that also only in the monstrous events of a living State show that astonishing expression of greatness on their faces. (...)(Nietzsche, 1872).

(\*<sup>9</sup>) In this highly influential document dating from the 6<sup>th</sup> century BC, according to Jacques, five major concentric, geographical zones are described, “emanating outwards from the capital royal domains, princely

to the placing of China at the world's center in some ancient world maps (\*<sup>10</sup>). Ricci's map was one of the first not to place Europe at the center of the world, but East-Asia and the Pacific ocean<sup>(55)</sup>. In Gosset's paper <sup>(55)</sup>, Chinese 'centrality' is defined (or better 'China's centralities', in plural), as being a direct reference to the Chinese name for China, *Zhongguo*, (中國 in traditional Chinese characters). It is a literal translation of 'Central Country', and hence 'Central Kingdom'. This suggests it rather refers to the geographical center of the Chinese culture, than to a globe-dominating realm.

Therefore, it is all the more surprising that Big Tech companies like Microsoft, Meta, Elon Musk's X, as well as their Asian counterparts, promote a One World Policy for their business models at a global scale, as if we hadn't learned one jot from the world's history of cultural supremacy and oppression. Presumably, tending towards a global monopole is inherent to the growth model of most capitalist (ad)ventures, including the newly adopted markets. But in education, it simply doesn't work.

## **7. CONCLUSIONS**

In this commentary, the educational crisis in several countries of different world regions are compared and discussed. Educational crises have been witnessed in historical times too, sometimes as a result of political reforms or resulting from major socio-economic changes (following mass immigration or integration of new economic groups). A brief description of the historical background and global trends in education form a starting point for the present analysis.

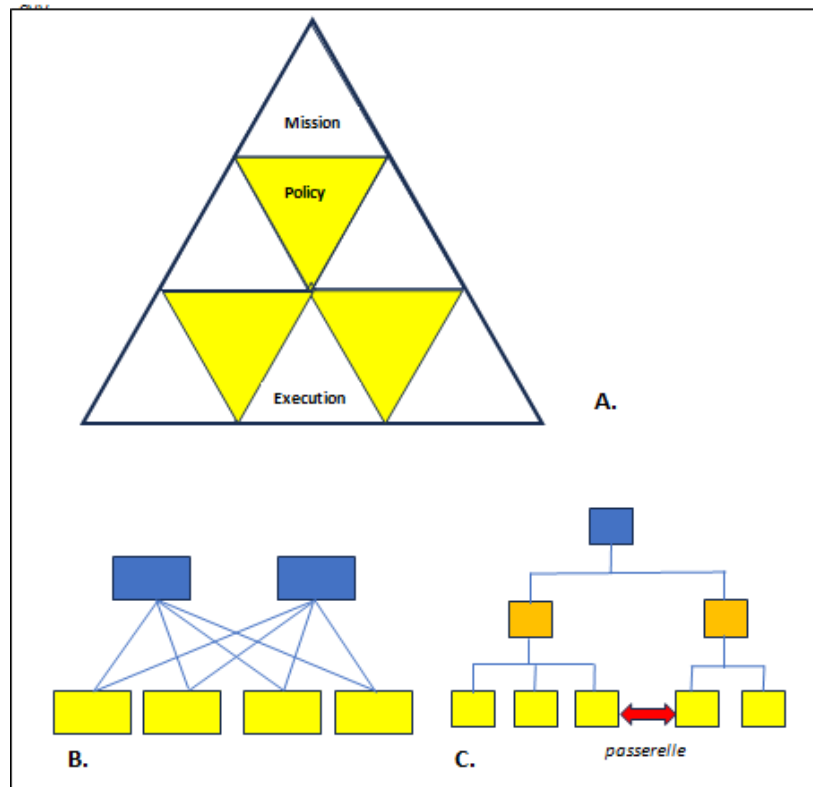
On the one hand, a continued strong influence of the Information Processing Approach and the application of the principles of Administrative Organization to the domain of education are considered important for the contemporary state of many westernized education systems. Moreover, there seems to exist a direct link with the growth, global expansion and increased capitalization of Big Tech companies, both in the computer industry and in the circle of owners of social networks. The implementation of the Administrative Organization appears to follow the security demands of an increased global susceptibility to cybercrime, ransom ware and social distortion and polarization following the influencing work of hackers, political trolls, etc. on certain internet platforms. An interesting question remains to be answered, namely whether the global increase of cybercrime and the increasing load of social distortion follow the global expansion of the internet and IC technologies, or that the latter are an answer to the former.

As a matter of fact, the opportunities that have been created following the increased availability of digital services, have not been proven an effective remedy for the deteriorating education results neither in Europe nor in the majority of OESO countries. Still, political influencers on several platforms try to increase the centralized state control on education. This increased tendency to control both the formal aspects of education, such as costs, outcome, duration, etcetera, as well as the pedagogical content, forms an additional challenge on top of the previous.

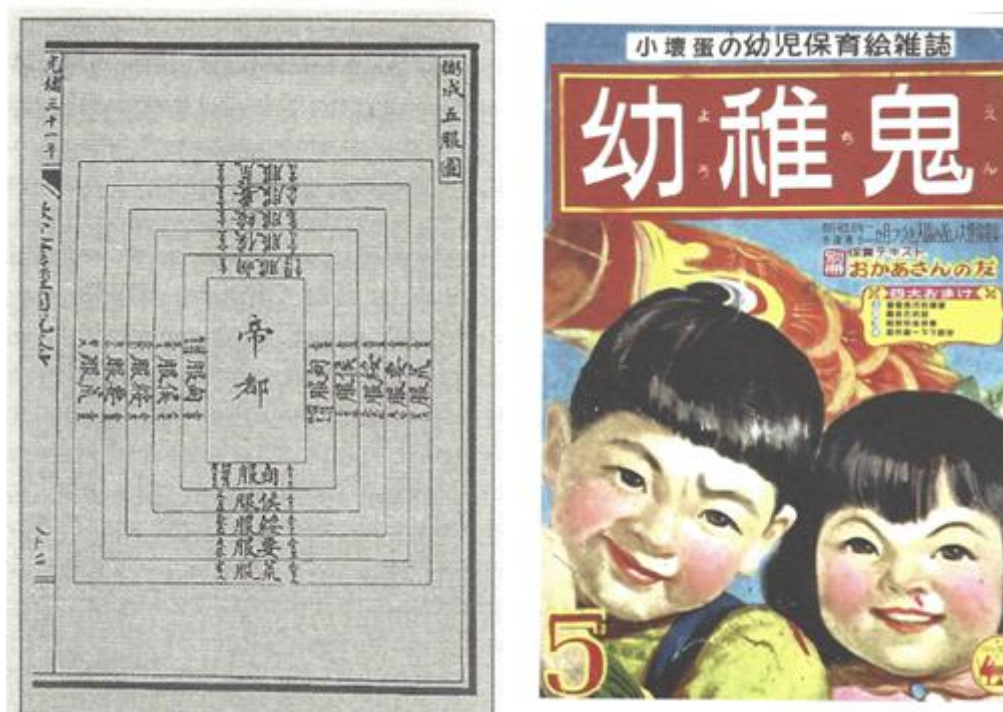
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domains, a pacification zone, the zone of allied barbarians and (ultimately) the zone of savagery. These zones have conventionally been portrayed in rectangular form, in line with the cosmological notion of a square earth". (Jacques, 2012, p. 305).

(\*<sup>10</sup>) One such map was fabricated by the late medieval European discoverer, theologian and mathematician Matteo Ricci (1552-1610), the first European to translate Confucius (551-479 BC), and, presumably also the first European to be admitted to the Forbidden City of the Chinese Emperor's court (Gosset, 2013).



**Fig2.** Examples of schemes for organization forms in business, administration and education: A. Pyramidal or hierarchical model; B. Functional Organization; C. Line organization with 'passerelle'(red arrow)(B and C modified after Boer and Krabbendam, 1983, <sup>36</sup>).



**Fig3.** A. Reproduction of the 6<sup>th</sup> century BC scheme from a document in the Shujing book of History, representing the ancient Chinese view of the World (courtesy of M. Jacques, ©2012); B. The fear for Asian children exceeding the European students in education results, as exemplified by successive P.I.S.A.-assessments (see Fig. 1 and main text), is not what the picture in this cartoon suggests: the 'childish demon' (translation of Chinese characters), figuring on a kindergarten advertisement (!), shows a truly 'universal' picture. As mentioned before, the 'real' demon resides in the imagination (© Images of Taiwan's Travel, original 15.5 x 10.5 cm, mfrs. Taiwan Railway Company).

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