ABSTRACT: This review relates the knowledge of Yuval Harari's Work to Education. The book highlights human development through processes that progressively required less manual effort, allowing time and energy to be directed to cognition. Two brands became evident: the ability to collaborate with similar ones and the tendency to eliminate different ones. The Cognitive Revolution, between 70 and 30 thousand years ago, underpins our complex capacity for language and fiction, enabling coexistence in large groups of humans. We have made ourselves and our societies complex, and there is ample evidence that the greater the diversity and complexity of an ecosystem, the more it can resist threats. However, our historical course has often been in favor of homogenization. Thus, thinking about the focus of education and how to learn to live with the richness of diversity is thinking about the quality of individual lives and also about the future of the human race, as one.

KEYWORDS: Education. Complexity. Pedagogical thought.

RESUMO: Esta resenha relaciona os conhecimentos da Obra de Yuval Harari à Educação. O livro evidencia o desenvolvimento humano por processos que progressivamente exigiram menos esforços manuais, permitindo direcionar tempo e energia à cognição. Duas marcas ficaram evidentes: capacidade de colaborar com semelhantes e tendência a eliminar diferentes. A Revolução Cognitiva, entre 70 e 30 mil anos atrás, alicerça nossa capacidade complexa de linguagem e ficção, viabilizando a convivência em grandes grupos de humanos. Tornamos a nós mesmos e nossas sociedades complexas e há amplas evidências de que, quanto maior a diversidade e complexidade de um ecossistema, mais ele pode resistir a ameaças. Porém, nosso percurso histórico tem sido amiúde em favor da homogeneização. Assim, pensar os focos da educação e em como aprender a viver com a riqueza da diversidade é pensar qualidade de vidas individuais e também no futuro da raça humana, uma.

RESUMEN: Esta revisión relaciona el conocimiento del trabajo de Yuval Harari con la educación. El libro destaca el desarrollo humano a través de procesos que progresivamente requirieron menos esfuerzos manuales, permitiendo que el tiempo y la energía se dirigieran a la cognición. Dos marcas se hicieron evidentes: la capacidad de colaborar con similares y la tendencia a eliminar diferentes. La Revolución Cognitiva, hace entre 70 y 30.000 años, apuntala nuestra compleja capacidad de lenguaje y ficción, posibilitando la convivencia en grandes grupos de humanos. Nos hacemos complejos a nosotros mismos y a nuestras sociedades y hay amplia evidencia de que cuanto mayor es la diversidad y complejidad de un ecosistema, más puede resistir las amenazas. Sin embargo, nuestro camino histórico ha sido a menudo a favor de la homogeneización. Por lo tanto, pensar en los enfoques de la educación y cómo aprender a vivir con la riqueza de la diversidad es pensar en la calidad de vida individual y también en el futuro de la raza humana, unirse.


In the catalogues, this work is not in the area of Education, but is a title of high relevance to understand the broad context in which the educational action, its potentials, limits and the risks of following the status quo are included. The brief history of humanity told by Harari adopts a long-term view rarely addressed, by arguments that depth requires delimiting scope, though knowing that this narrows our view. The author achieves a rare balance, deserving the multiple recognitions he has received.

In this review, we focus on the potential of the work for pedagogical thinking and reflection on the role and potential of Education. From the outset, it is underlined and detailed that "it is our current exclusivity, not the multiplicity of species in our past, that is peculiar - and perhaps incriminating" (HARARI, 2015, p. 16, our translation). From multiple species of humans, we, Sapiens, are proud of our intelligence built by the fact that "humans have diverted energy from the biceps to neurons" (HARARI, 2015, p. 17, our translation). With this, we are born weak, much less physically developed than other children, and therefore we can "be educated and socialized to a much greater extent" (HARARI, 2015, p. 18, our translation).

Factors such as the mastery of fire allowed us to shift the time from chewing to the act of thinking without an immediate practical obligation. And if 150,000 years ago, Africa was already inhabited by sapiens biologically equal to us, which we usually treat as major developments of the last thousands of years are predominantly related to cultural aspects. In this, a recurrence: where sapiens have passed, large predators, especially mammals, including our Neanderthal cousins, were extinguished "too similar to ignore, but too different to tolerate" (HARARI, 2015, p. 27, our translation). The trail of humanity, in the extended view,
is of elimination, without tolerance having been evidenced as a characteristic. In another sense, we always coordinate collaboratively and this is the great mark of humanity's prevalence. That is, we easily collaborate with equals, and easily identify differences and seek to eliminate. Education, it seems to us, plays a central role in how much we can be more or less tolerant and also more or less annihilating depending on how we approach our differences and similarities.

Harari designates the very important Cognitive Revolution between 70 and 30,000 years ago. Convergence is that we are a versatile language that has allowed us to exchange information and, also and surprisingly, to talk about fiction: conjecture possible realities, and share impossible. This was a special step for us to be able to live together in large groups, sharing horizons and cooperating on their behalf: "sapiens can cooperate in extremely flexible ways with countless strangers" (HARARI, 2015, p. 33, our translation). The sharing of myths, the construction and communication of common beliefs, is fundamental to our social organization. And "the way people cooperate can be changed by changing myths - telling different stories" (HARARI, 2015, p. 41, our translation). It is through the articulation and proliferation of visions of reality and the construction of fictions that, after such a revolution, "sapiens have been able to change their behavior quickly" (HARARI, 2015 p. 42, our translation).

This process declared some independence and in relation to biology and we built social models such as "nuclear families and monogamous relationships that are incompatible with our biological program" (HARARI, 2015, p. 51, our translation). That is, we began to make "cultural choices, within an amazing set of possibilities" (HARARI, 2015, p. 54, our translation). We begin to treat these choices as biological determination, or natural tendencies, which seems to us a service, also provided by formal education, of interest to the maintenance of certain conditions of our social organism. We infer that we have developed in the search to collaborate to prevail, and it is not immediate that we are following to develop. Harari says that "the average hunter-gatherer had more comprehensive, deeper and more varied knowledge of his immediate environment than most of his modern descendants" (HARARI, 2015, p. 58, our translation) - we created new fields of knowledge, and dedicated ourselves to them, without realizing that we have lost capabilities, which includes spatial knowledge and the presence of collaborative strategies. In addition, the author indicates that "the average brain size of a sapiens has effectively decreased since the age of hunter-gatherers" (HARARI, 2015, p. 58, our translation). By the North, it seems that the improvement of agriculture industry allows to take advantage of the work of others, creating "new niches for 'ignorant'"
(HARARI, 2015, p. 58, our translation), in both directions: those who exploit, unlearn, detach from the fundamentals tasks, and those who are exploited reduce their action to repetitive and little-in-depth tasks.

As a consequence, a farmer works harder and has a less rich diet than a hunter-gatherer (HARARI, 2015, p. 90). In this sense, Harari states that "plants domesticated Homo Sapiens, not the other way around" (HARARI, 2015, p. 90, our translation). Still, some sapiens progressively domesticated the plants and other sapiens dominated through agriculture. The multiplication of wheat allowed human multiplication, which strengthened the cultivation. Thus, the author summarizes "the essence of the Agricultural Revolution: the ability to keep more people alive in worse conditions" (HARARI, 2015, p. 93, our translation). Privileged conditions have been leveraged: "one of the few railway laws in history is that luxuries tend to become necessities and generate new obligations" (HARARI, 2015, p. 97, our translation).

The agricultural revolution made the future more important and inherited the "discrepancy between evolutionary success and individual suffering" (HARARI, 2015, p. 105, our translation). This seems to occur in several species: there are more and more chickens in the world, but they become a species with the function of expelling eggs and decimated in meat. Calves that live cloistered to ensure the softness of the flesh, possibly live the ecstasy of the first steps precisely in the short way to the slaughterhouse. In the same sense, "with each new generation, sheep become fatter, more submissive and less curious" (HARARI, 2015, p. 101, our translation). This perception of harmful effects is little revealed in the texts we often read, because "history is what a few people did while all others were plowing fields and carrying buckets of water" (HARARI, 2015, p. 111, our translation). And this most told story has become our guiding myth for what we have been in the most recent part of this journey. Harari indicates some factors that prevent us from realizing that what guides us is far from being a natural order, but that this order only exists in our imagination. We do not understand or, knowing, we do not deviate from this, because: i) this order is embedded in our material world; ii) it defines our desires; iii) it is intersubjective (and let us remember that this is the most important trigger of our differentiation). It seems to us that these pillars are in close relationship with our educational model.

As for our specialized developments, the author points out that our brain and our memory are biologically prepared to deal with specific types of information, which did not involve the multiple number managements that progressively became vital. From this, the writing developed that, in the beginning, "was limited to facts and numbers" (HARARI, 2015,
p. 131, our translation). The author, analyzing tablets from 3,000 to 3,400 BC, states that "it is revealing that the first name recorded in history belongs to an accountant, and not to a prophet, poet, or great conqueror" (HARARI, 2015, p. 131, our translation). As for writing systems, he points out that "those who invented them could not create efficient ways to catalog and access data" (HARARI, 2015, p. 136, our translation). Our most efficient mechanisms in terms of registration and reproduction have thrived. This was associated with the idea of separation, specialization, thematic areas and, due to the limitation of these mechanisms, "things that belong to more than one drawer [...] are a terrible headache" (HARARI, 2015, p. 138, our translation). Therefore, we can say that "writing was born as a hand-held human consciousness, but gradually became his mistress" (HARARI, 2015, p. 140, our translation).

We usually tell the story that we were leaving our rudimentary behind and becoming extraordinary beings, without attention to the fact that, in this journey, we extinguished or tried to dominate everything extraordinary we find. It is reasonable to think that we are asserting this mechanism against ourselves: "those who were victims of history once tend to be victimized again. And those that history favored tend to be privileged again" (HARARI, 2015, p. 151, our translation). What we can see, however, is that we have an accurate awareness and that before our ability reverts, to limit ourselves to following commands, we are able to adopt new trends. The way, we know: tell new stories. To do so, we have to question our notion of natural laws and question what some tax as "unnatural." Harari explains that "a truly unnatural behavior that goes against the laws of nature simply would not exist and therefore would not require prohibition" (HARARI, 2015, p. 155, our translation). He warns that what we usually call natural does not refer to nature, but to theology. And he explains that "a good basic principle is that "biology allows, culture forbids" (HARARI, 2015, p. 154, our translation).

While biological evidence is broad that the greater the diversity and complexity of an ecosystem, the more it can withstand threats, our historical path has always been in favor of homogenization. Our cultural diversity has often been treated as a hindering one for development, and this development may have more to do with the predominance of a narrow framework than to become more capable of responding to the threats to our existence. In this sense, the author signals that we are moving towards a unification of humanity, and assumes that "the best way to evaluate the general direction of history is to count the number of distinct human worlds that coexisted at a given moment on the planet" (HARARI, 2015, p. 175, our translation). It is clear that this number has continuously decreased. This process of
cultural uniformity has the imperialist, theological arguments, but another factor of convergence of belief has emerged, because "people who do not believe in the same god or obey the same king are more than willing to use the same money" (HARARI, 2015, p. 180, our translation). In this sense, "money is not a material reality - it is a psychological construct" (HARARI, 2015, p. 187, our translation), configuring itself as the "most universal and most effective system of mutual trust ever invented" (HARARI, 2015, p. 188, our translation).

Money strengthens specialization, and is dedicated to value everything under the same metric. It produces a broad system of mutual trust. To estimate the value of everything, the sense of what is invaluable is emptied. Money has joined religion and empires as humanity's greatest unifier, and seems to be making even wider luck than its predecessors. Money, however, although not a material reality, generates material effects and has its privileged carriers. If, for universal beliefs, "it makes no difference whether a specific kingdom wins or loses" (HARARI, 2015, p. 222, our translation), by the universal value of money, economic asymmetry generates, yes, winners and losers, establishing the very reference of gain. That is, we choose a universal lord who produces inequalities, not a vision that brings us closer in a minimally isonomic way. Therefore, we can infer that we are not creating a unified humanity, but a unified domain. And this domain is based, as already treated, on the construction of desires and intersubjective belief. This endless search for satisfaction, and the ephemerality of encounters, generates other creations in our minds. It is in this direction that "suffering is caused by the patterns of behavior of our own mind" (HARARI, 2015, p. 233, our translation). Money seems to us that it has convinced us more to our rational, social, cultural inclinations than our biological dimension. And so, Harari brings an important question: "How long can we maintain the wall that separates the biology department from the departments of law and political science?" (HARARI, 2015, p. 245, our translation). Of course, we can include Education in this departmental list.

If economic precepts have been dictating our latest steps as humanity, it is worth noting that "the modern economy grows like a teenager flooded with hormones" (HARARI, 2015, p. 315, our translation). And this cycle is significantly short, in the face of our entire journey. Therefore, "to say that global society is inevitable is not the same as saying that the end result had to be exactly the kind of society we have today" (HARARI, 2015, p. 246, our translation). To know this dynamic is essential so that we do not limit Education to approaches focused on supposed purity, and that we are attentive to the fact that "science is unable to establish its own priorities" (HARARI, 2015, p. 284, our translation). The work
expresses that, for much of the journey, the sapiens did not believe that the future would be better than the present, and moved in search of survival. The economic creed has offered us the expectation (full of desires) of a substantially better tomorrow than today, and this has moved us in an unbridled search that has not shown indications that we are living in better welfare conditions. And we deal not only with material issues, but of the relationship of desires and possibilities, which puts us in a constant sense of dissatisfaction, failure and suffering.

Education has focused on contributing to the mechanisms that promise better material conditions, and deviated from the challenge of revisiting the origin of these longings and, perhaps, encouraging the creation of new possible stories. As we can see from the reading, the economic mechanisms depend on the belief that the economy will continue to grow, that is, the confidence that this path will lead us to a better future. On this journey, we eliminate the rich complexity, transforming nature into something homogeneous that serves the best hegemonic interests, and moving away from our closest contexts to connect to a future expectation and a diffuse community. It seems that this has brought us many desires, but little happiness. Can we continue to guide children and young people on the same path? Can we educators continue to walk for them? These are questions that the work inspires us to ask in the individual field, knowing, however, that it is the intersubjective, the collective, what we believe and reproduce massively that dictates our path to global humanity.

The work shows that we do not differ substantially from other species at the individual level or from small groups, but in the possibility of collaborating in large groups and building collective fictions and innovative solutions. Our historical course has led us to a supposed prosperity, because we multiply substantially and, at the same time, the feet of wheat and cattle, more recently, to the technological paraphernalia. On this historical journey, contrary to what we can feel, we have not become smarter and, as we feel, we are probably not happier than our ancestors. For education, this understanding is substantial: we need to rethink our knowledge as substantially collective, and we need to review our educational focus. Happiness needs to enter the list of prosperity values, to the detriment of the convinced titles - of status or property. Fortunately, the work also brings some indications in this direction, which are already, also, here in these between the lines.
REFERENCES


How to refer to this article


Submitted: 17/10/2021
Revisions required: 20/02/2022
Approved: 01/04/2022
Published: 01/06/2022

Processing and publication by the Editora Ibero-Americana de Educação.
Correction, formatting, standardization and translation