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## **Mechanics of educational influence: The Recursive gDZIK Model**

**Mechanika wychowania. Rekurencyjny model gDZIK**

**Abstract:** This article proposes a new approach to defining upbringing as a form of educational influence, aiming to bring academic understanding of the concept closer to the social practices that shape its essence. The model presented frames upbringing as a process of actively, though not always consciously, transforming social interactions. The prototypes of upbringing discussed in the article illustrate how revitalizing existing practices can make educational influence tools universally accessible across generations. Upbringing, understood as a recursive process, offers new perspectives for educating future generations in response to evolving social realities.

**Keywords:** upbringing, existential debt, giving, upbringing prototypes, recursive model.

I knew I had to be at the station. I did it for the people fleeing the war. I did it for myself. Someone once welcomed two children here – my grandmother and grandfather. I have repaid a debt of gratitude. It makes me feel happy. (Rudnicki, 2023, p. 47, own translation)

I know I have little life left, and reason dictates that I withdraw from everything and concentrate my efforts solely on writing thoughtful works. I hope that in two or three years, I will be able to take

a long-term leave, and by that time, I will have sent students from my teaching nest who will be able to take my place. In this way, I will repay my debt to Poland, where I have found so much kindness, sincere friendship, heartfelt camaraderie, and true love. Perhaps among my students, there will be those who will continue my work and accomplish what I will no longer have time to complete (Hessen, 1973, p. xi, own translation).

## Introduction

The concept of upbringing poses a particular challenge, as its academic definitions are often counterpointed by social practices. The work on this fundamental term in pedagogy is typically undertaken by experienced educators (Łobocki, 2006; Śliwerski, 2007; Suchodolski, 1959), whose well-established positions add inertia to the concept, detaching it from the contexts in which these definitions originally emerged. The customary lack of reference to specific practices of upbringing (or educational influence in a broader sense) creates the impression that every participant in the debate knows what they are talking about, yet is unaware of the practices others – and especially readers – have in mind. Therefore, in proposing a new approach to the issue of upbringing, I also point to prototypes – privileged examples that aid in constructing one's own mental models, a feature usually absent from texts on upbringing. The gDZIK model was developed in response to the need to understand upbringing as an autonomous process, beyond typical utilitarian norms. It is a recursive model that, much like natural processes, regenerates itself through continuous giving and cultivating, remaining in constant intergenerational motion.

The term *mechanics* is used metaphorically in this article to describe the dynamic and recursive processes underlying educational influence. Unlike the rigid and deterministic connotations of mechanics in classical physics, the “mechanics of educational influence” refers to a flexible, evolving system that regenerates itself through cycles of giving, imitation, and cultivation.

While this article primarily focuses on upbringing, it frames the concept within the broader context of educational influence, emphasizing a perspective that extends beyond family-centered processes. By connecting these terms, the article seeks to expand the understanding of upbringing to encompass the universal processes of educational influence that overstep cultural or institutional boundaries.

Upbringing, broadly understood as *transforming a person* (Sośnicki, 1964), has become a suspect concept. During one of the meetings at Akademickie Zacisze (Leppert and Wróbel, 2024), it became apparent that the

traditional understanding of upbringing has become difficult to distinguish from manipulation – a situation in which the goal of influence is fundamentally covert and only seemingly beneficial to the person being influenced (Wróbel, 2006). There are several reasons for this unwanted convergence between upbringing and manipulation. The two concepts were never far apart, but the primary issue lies in the dominance of manipulation in consumer society. It began with basic mass marketing, then progressed to segmenting customer groups, and ultimately reached a tipping point: the modification of social media users' behavior for political purposes (Susser, Roessler and Nissenbaum, 2019), contributing to the phenomenon of social polarization (Tucker et al., 2018). In the face of such developments, upbringing appears to be a specific, yet technologically unrefined, variant of manipulation.

How can we describe upbringing in a way that is adequate for contemporary times and challenges, while remaining grounded in actual social practices? Practices of upbringing can be peculiar and evolve over historical time (Kot, 2010). This historical perspective allows us to take some distance from the role of definitions in shaping social practices. Rather than providing a fixed definition, we select from social reality what, as professional educators, we are able to distinguish (from the boundless realm of socialization and omnipresent manipulation), label it as upbringing, and make it the core of pedagogy as a scientific discipline.

There are many forms of influence that can be distinguished. In schools, there are numerous teachers whose work transforms children and youth so positively that it can be referred to as upbringing based on the results. It is more difficult to point to upbringing when such results are (not yet) visible. At the same time, society exhibits both a reluctance toward the school's educational role – shared by students, parents, and teachers – and a tendency among teachers and parents to shift the responsibility for carrying out upbringing onto one another (Sędek, 2019). Labeling a particular influence as upbringing can therefore provoke social resistance to it.

The number of definitions of upbringing has grown over time. Even in the face of social changes, theorists of upbringing do not discard earlier definitions, merely expecting adjustments to the goals, and certainly not rejecting the entire idea of upbringing that legitimized educational institutions. For instance, during the political transformation in Poland, educators anticipated a shift in the goals of upbringing (Górniewicz, 1993; Kwieciński, 2001) and wrote extensively about democracy. The Polish state, in turn, imposed successive educational goals: initially, as an opposition to *homo sovieticus*, it promoted the entrepreneurial individual (Elżbieta, 1999;

Starego, 2010), even the notion of a *self-entrepreneur* (Ostrowicka, 2013), and following a right-wing populist shift, the focus turned to the patriotic citizen (Solarczyk-Szwec, 2023). However, beyond the provisions of the core curriculum, the Polish state does not align with teachers on essential issues, such as fostering a sense of dignity among those who shape social attitudes through their work – a matter that was voiced during the largest teachers' strike in Polish history in 2019 (Kowzan, 2023). This spectacular rupture in the alliance between the state and teachers led me to adopt a more anthropological approach to upbringing, which essentially takes place independently of the state and autonomously from its policies in this regard.

### **Constructing a New Definition of Upbringing**

I assume that upbringing is an autonomous social practice, meaning it takes place for its own sake. Upbringing leads to more upbringing. This is not so much a tautology as a generational relay. It fosters in people the capacity to engage in the process of upbringing themselves.

This is a lasting activity that spans generations and cannot be reduced to utilitarian purposes. The recursive model operates regardless of whether the person providing the upbringing witnesses the results – its effects appear in future generations. This activity can be roughly understood as giving, in reference to the total dimension of gift-giving (total prestation) described by Marcel Mauss (Graeber, 2001; Mauss, 1966). For Mauss, this form of gift does not trigger a sense of obligation for reciprocation. Since the definition of upbringing focuses on describing the practice, I suspend the potential material dimension of these gifts and focus on the act of giving itself, such as offering advice, assigning tasks, posing questions, or providing peace. Thus, upbringing is an act of giving that leads to more upbringing.

*Leading* can be understood as building capacity. Anthropologists might describe this as the ability to recognize *the hau*, the spirit of a gift that demands its return (Mauss, 1966). In the case of upbringing, this pertains to the growing significance, within the recipient, of the unique way in which the act of giving occurred. Those who receive can reflect on how they came to be who they are and, in doing so, recognize that they were recipients of a gift: "To whom do we owe our lives?" (Graeber, 2011, p. 67). In practicing upbringing, we do not give with the intention of reclaiming something from the recipients later. This is a debt we repay, much like Rudnicki (2023) repaid a debt of gratitude by helping refugees, acknowledging those who once helped his grandparents. His personal experience, cited in the epigraph of this article, demonstrates how the mechanism of upbringing can function

in practice, leading to actions oriented toward the good of others. We give in a way that becomes understandable only after years have passed, as the material dimension of this process is minimal. We give and then disappear, leaving a sense of debt – part gratitude, part burden – that propels people toward others. Upbringing is rooted in evoking an existential debt. This mechanism can be understood as follows:

We owe our existence above all:

- To the universe, cosmic forces, as we would put it now, to Nature. The ground of our existence. To be repaid through ritual: ritual being an act of respect and recognition to all that beside which we are small.
- To those who have created the knowledge and cultural accomplishments that we value most; that give our existence its form, its meaning, but also its shape. Here we would include not only the philosophers and scientists who created our intellectual tradition but everyone from William Shakespeare to that long-since-forgotten woman, somewhere in the Middle East, who created leavened bread. We repay them by becoming learned ourselves and contributing to human knowledge and human culture.
- To our parents, and their parents-our ancestors. We repay them by becoming ancestors.
- To humanity as a whole. We repay them by generosity to strangers, by maintaining that basic communistic ground of sociality that makes human relations, and hence life, possible (Graeber, 2011, p. 67).

The ability to recognize the spirit of a gift – the uniqueness of what we have received – is cultivated through engagement with significant events in our lives.

To clarify how this capacity develops, we need to consider two concepts: imitation and cultivation. Recognizing the role of imitation as a driving force of social change at every scale ties back to the sociological ideas of Gabriel Tarde, who argued that social order is governed by chains of imitation. These chains generate similarity within groups and toward shared models, establishing behavioral standards that we are both inclined and expected to replicate (King, 2016; Tarde, 1903). Today, this contagious aspect of collective human (Gelfand et al., 2020) and non-human behavior (Rinott and Tractinsky, 2022) is better understood and empirically validated through studies of cognitive and behavioral changes induced by synchronization in

movement (e.g., marching or dancing), voice (e.g., singing), and emotions (e.g., breathing) among humans, as well as between humans and other animals (Wanser et al., 2021).

Synchronization in movement fosters altruistic behaviors in children, not only within the practicing community (Tunçgenç and Cohen, 2018) but also by enhancing their ability to cooperate with previously unknown peers (Rabinowitch and Meltzoff, 2017). Our innate sensitivity to rhythm (Kirschner and Tomasello, 2009) and the pursuit of rhythm in action form the basis for both the deep bonds created through collective euphoria (Cohen, Ejsmond-Frey, Knight and Dunbar, 2010) and the slow art of entrainment – synchronizing with one's living environment (Roenneberg, Daan and Merrow, 2003). Gradual recognition that both rigid practices like military drills and spontaneous phenomena such as communal noise, laughter, free play, or simply clapping for others contribute to upbringing highlights the importance of emphasizing the choreographic turn in education.

Cultivation, on the other hand, introduces loops into the timeline, seeking to evoke and bring to fruition what once was. Repetitions are imperfect, leading to re-creations in which events, as it were, rhyme with previous ones, forming patterns. The process is initiated by choosing what is to be cultivated. Such collections of practices suitable for repetition may result from spontaneous imitation, where rhythm stimulates the body. The decision to cultivate can be an individual choice, motivated by the memory of a past moment of joy.

I consciously avoid categorizing reality with the term *culture* to steer clear of focusing on recognized artifacts and traditionally hierarchical values, as virtually anything can be chosen for repetition. Older individuals, with their greater life experience, hold more memories of events worth cultivating, while younger individuals possess greater potential to repeat these practices many times over their lives. While imitation is a total, biological, and bodily automatism reliant on the senses, cultivation is the fruit of a decision. Cultivation reveals the agency of individuals in choosing what to revisit and attempt to recreate. This does not mean that the decision must necessarily be directed toward a noble educational goal. Too much depends on the quality of execution, and the value tied to the direction of the induced change becomes evident only in retrospect. Cultivation involves drawing on memory and arranging opportunities.

The metaphor of cultivation is a longstanding tradition in thinking about upbringing and education in general. It brings references to agriculture or gardening, with adaptation as its primary fruit. This metaphor emerges

when we think about education on a large scale. For instance, Nussbaum (2003) emphasizes the content to be cultivated at the level of university education in the United States – an empire – aligning this with references to antiquity, which she uses to legitimize change. This is political education for elites who interact with the entire world while having limited understanding of it. Humanism and democracy are the core values around which her liberal academic program revolves.

In contrast, in China, cultivation operates at two levels: as part of the common habitus, shaping the dispositions of individuals through deeply internalized Confucian ideals, and as a doxa – the unquestioned and universal framework of social life. This dual nature makes it simultaneously adaptable and resistant to critique (Hsu and Wu, 2015). This makes it easier to describe than to redesign. Criticism of education as cultivation thus has little impact in both cases: in the United States, due to the demand for imperial cadres, and in China, due to the inertia of development. From a European perspective, the American approach remains significant, and Biesta (2014) critiques it for choosing humanism as the central focus of what should be cultivated. In place of this philosophy, he advocates abandoning misleading assumptions about humanity and opening to the unknown:

education should focus on the ways in which individuals come uniquely into the world. I have approached the idea of ‘coming into the world’ in terms of Hannah Arendt’s idea of ‘action’ – which is never an individual capacity but the outcome of the ways in which others take up our beginnings in new and unpredictable ways; ways that are fundamentally beyond our control (Biesta, 2014, p. 19).

This critique aligns with what I propose in this article: first, acknowledging the unpredictable imitation accompanied by the joy and risk of synchronous action, which seems to resonate with what Biesta advocates; and second, intentional yet content-open cultivation, as the educational value lies in the very mechanics of repetition.

Upbringing, therefore, is an act of giving that, through accumulating examples of spontaneous imitation and intentional cultivation of selected events, fosters in individuals the ability to recognize the uniqueness of this act of giving. This, in turn, leads them, through the repayment of an existential debt, to undertake the process of upbringing themselves.

Thus, upbringing can be represented as:  $D_{n+1} = g(D_n, Z_n, I_n, K_n)$  where:  $D_{n+1}$  represents the acts of giving generated in the next cycle by individuals who were recipients in cycle  $n$ ,  $g$  is the function that transforms



the recipients' experience into new acts of giving, and  $n$  denotes the stage or generation in the process of upbringing. D (Dawanie – Giving) represents the initial act of giving. Z (Zdolność – Capacity) refers to the development of capacity inspired by the act of giving. I (Imitacja – Imitation) stands for imitation. K (Kultywowanie – Cultivation) signifies cultivation.

In practice, the gDZIK model means that every act of educational influence – whether it involves giving advice, support, or tasks – returns to the community where it originated, but in a new form, enriched by the experiences and reflections of those who were recipients.

In this model, the upbringing of each new generation ( $n+1$ ) is a direct result of the experiences gained by the previous generation ( $n$ ). This process continues *ad infinitum*, symbolizing the perpetual spread of giving as a cultural and educational value. The model highlights that the ultimate outcome of the upbringing process is not only the development of individual capacities, experiences, knowledge, and traditions but also *leading by example* – inspiring others to continue giving, which creates memory traces within the community where giving remains an ongoing process.

This mathematical representation highlights the dynamic and recursive nature of upbringing in society. Through upbringing, we overcome separation: “you are free from your debt

to the sages when you become a sage, you are free from your debt to humanity when you act with humanity” (Graeber, 2011, p. 68).

### Prototypes of Upbringing

Even if the definition I propose is considered precise, identifying real-life examples of upbringing that align with it may pose a challenge. Therefore, I will present two examples of educational practice that effectively represent the components of the definition, although these attributes are secondary to the significance of the practices themselves – one rooted in culture, the other in schooling. My goal is for these examples to function as prototypes that can be creatively developed. Without prototypes, categorizing other practices would become more difficult (Gemel, 2013), and the definition might turn out to be barren.

Ultimately, I also hope that this semantic approach will help readers construct their own mental models of upbringing – simplified representations of reality that enable intuitive understanding of the complexity of upbringing and active contributions to these processes.

The first prototype of upbringing is the tradition of Santa Claus. It is worth tracing the entire process that children in our culture typically



go through. Initially, they are given gifts by adults who pretend not to be the driving force behind the endeavor. Then, after a few years, children are made aware that Santa does not exist. At this point, it becomes clear that adults staged this illusion for some reason. The critical step in completing this educational process is the realization for each child that: You, too, can become Santa.

The figure of the unknown, magical benefactor is central to this process. It ensures that the commonly practiced reciprocal relationship in society – where one repays a specific person, for instance, by saying *thank you* and hearing *you're welcome* in return – does not take root. After going through the phase of critical understanding, a child can join those who secretly give gifts, while carefully concealing the mutuality of their actions.

As we observed in the proposed formula for upbringing, educational practice is literally based on giving, which, in this context, brings joy while simultaneously building a capacity – or, as it later becomes clear, creates an obligation to imitate behaviors and creatively cultivate them afterward. That we are dealing with creative cultivation in subsequent cycles can be easily confirmed by examining mass social mobilizations with a similar structure like the Great Orchestra of Christmas Charity in Poland.

The second prototype is directly linked to teaching. This connection between didactics and upbringing is fairly obvious, although it is usually articulated as processes occurring under the shared roof of a school, as schools are “tasked with establishing and implementing the fundamental goals of upbringing through carefully planned, long-term processes and linking them with various extracurricular didactic and educational influences on students” (Kupisiewicz, 2012, p. 49).

This prototype of upbringing is specific in that it involves a non-dialogical (cf. Rutkowiak, 1992) way of handling children's questions. It refers to a situation where a student takes a question posed by their teacher out into the world, asking it of others. Finding one's own answer to the question can itself be seen as a sign of learning, in line with Biesta's general formula: “We learn because we respond to whatever and whoever we encounter; we learn because we respond to whatever and whoever challenges, irritates or disturbs us; and we learn by finding our own response to such events and experiences” (Biesta, 2007, p. 11). However, repeating this question to others – especially if such behavior is cultivated – constitutes an event within the domain of upbringing.

I hope this prototype will help to highlight the connection between learning and upbringing, which is crucial insofar as teaching serves as the starting point for both processes.

## Discussion

In the interpretation presented here, teachers are with children for the children, and this is a social manifestation of upbringing. We, as a society, give teachers to children. We have organized this. It is planned. Teachers have a job that makes them available for children. However, the way this work is performed depends on what the teachers themselves have received, as is well illustrated by the example of Hessen referenced in the epigraph (Hessen, 1973).

Adopting such an anthropological perspective on upbringing offers a fresh lens for examining school cafeterias and how we provide food there. Existing pedagogical literature suggests that bureaucratization of social practices of giving undermines their educational function. This is well reflected in the statement of a participant from a grassroots effort to assist Ukrainian refugees at a railway station in Wrocław:

When we had already established our own system, some external system was imposed on us from above, and it kind of crushed us. Because it pushed us out; it sidelined us, but in a not-so-nice way, I felt. Suddenly, there was this system, and we couldn't anymore. People kept bringing food, and these makeshift kitchens emerged, but we weren't allowed to distribute that food anymore. Of course, procedures were introduced – sanitary inspections, they ensure safety – but in those earlier moments, they didn't exist, and nobody thought about it. Everyone was happy that people were doing this for free, organizing, and it was wonderful. And then suddenly: 'Don't do this, don't do that, step away from here (Rudnicki, 2023, p.174, own translation).

There is a problem with giving and existential debt: the state imposes procedures that make it difficult for givers and recipients to recognize the spirit of the gift. Additionally, capitalism has conditioned us to follow the rules of reciprocity – tit for tat – and existential debt cannot arise if recipients persistently express gratitude instead of reproducing the social practice itself.

The definition of upbringing introduced in this article is devoid of valuation; it identifies as upbringing anything that is done in a pattern-based way – that is, mechanically – even if these are not behaviors worth replicating. For example, some men take on the role of primary resource

provider when a child is born into the family. They spend more time working to earn money for the family. Their absence has consequences. However, the repetitiveness of this pattern and its occurrence across many cultures suggest that it represents a particular vision of upbringing.

### **Concluding Remarks**

The definition of upbringing proposed in this study – as giving that leads to more upbringing – breaks with the understanding of upbringing as the transmission of specific values, even though it relies on the work of obligations that can be described as moral. It goes beyond established pedagogical frameworks by offering a formal representation of this social practice. This allows for further exploration or questioning of the components within the mechanics of upbringing. In this new perspective, upbringing becomes less a matter of cultural heritage and more a combination of accidental and deliberate practices aimed at creating communities capable of self-reflection and fostering a culture of giving.

The future of upbringing must be built on a profound understanding of and engagement with both the unique, individual experiences of those being educated and the shared, social processes that shape our collective experiences. The practice of upbringing should therefore be flexible, adaptable, and open to the changes that will inevitably come with the evolution of society. The gDZIK model demonstrates that upbringing is not about achieving specific goals but about building long-term capacities that enable individuals to take autonomous actions in the future. This is its strength – upbringing transcends the boundaries of a single life, leading to social transformations on a larger scale. We can no longer treat upbringing as a relic of the past but as a dynamic element shaping future generations, equipping them to face challenges that we today can only vaguely anticipate.

The recursive mechanics of educational influence presented in this article means that the processes of giving, imitation, and cultivation are not linear or static but continuously evolve through their enactment in diverse contexts. This perspective allows us to view upbringing not as a series of isolated actions but as an interconnected, generative system. By framing upbringing within the broader scope of educational influence, the model highlights the transformative potential of these recursive interactions, extending their impact beyond immediate outcomes to shape future generations and societal structures.

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