

# A Concept of Transfer— Transfers of a Concept Generation in *Physiology, Pedagogy, and Politics around 1800*

STEFAN WILLER

*Zentrum für Literatur- und Kulturforschung Berlin*  
(Center for Literary and Cultural Research, Berlin)

## ABSTRACT

Using the pattern of subsequent generations, contingent processes of historical change can be narrated as if they were something natural. The article explores this naturalizing potential of the modern concept of generation by tracing it back to its origin around the year 1800, when current physiological theories about the “epigenetic” self-organization of life became applicable to pedagogical and political programs of “new” and “forthcoming” generations. The article also discusses the methodological question of how such conceptual transfers can be adequately described.

## KEYWORDS

education, epigenesis, futurity, gender, generation, innovation, procreation, society, transfer

Interdisciplinary concepts play an important role in what might be called the dialectics of disciplinary thinking. Logically, interdisciplinarity can only exist in relation to disciplines—disciplines which need not necessarily be fixed or firmly institutionalized but whose existence, nonetheless, is a necessary precondition for interdisciplinarity. Thus the historical study of interdisciplinary concepts can give evidence of the complex relation of constructing and criticizing disciplinary boundaries that is crucial for the development of modern scientific and scholarly thinking. It is particularly in notions signifying transformation, transposition, and translation that this dialectical relation can be found and historically examined. Thus an important field of study is the conceptual significance of genealogical concepts of transfer, such as *engendering*, *inheritance*, and *succession*, most of which are contained in the term *generation*.

The key concept of *generation* is used to describe relations of life, time, society, and individuality. In modern sociology—since Karl Mannheim’s famous essay on “The Problem of Generations” (1928)—*generation* is understood as an



important factor in the synchronic and spatial organization of societies. According to Mannheim, a given society is “stratified” in generations; from this stratification, “generational coherences” emerge (under certain social and historical conditions); from these coherences, “generational units” are formed, which can be understood as specific communities within the totality of a society.<sup>1</sup>

But in fact the word *generation* covers semantic aspects that seem to be quite different from this sociological meaning alone. Basically, *generation* means procreation, namely, the very act of engendering. This is the significance of the Latin *generatio* and the Greek *genesis*. *Generation* also designates the product of acts of procreation: both the direct filiation (the generation as horizontal genealogical unit) and the long line of posterity, as in the biblical phrase “unto all generations.”<sup>2</sup> This double meaning—engendering and posterity, or more generally action and result—was always already inherent in the lexical basis of *generation*, long before the modern sociopolitical notion directed it to social synchronicity and stratification.

This complex semantic relation indicates conceptual changes, transfers, and ambivalences. *Generation* is the name for an epistemic space in which we can find the convergence, concurrence, and competition of very different theories: theories about origin, growth, formation, and classification; about continuity and change between cultural and natural approaches. One of the most important features in the conceptual history of *generation* is this concept’s capacity to designate history and society as something natural. In fact, the pattern of subsequent generations can be regarded as the epitome of natural reproduction. Using the paradigm of *generations*, contingent processes of social change could—and still can—be narrated as if they are self-evident and self-reproductive. This goes along with a considerable naturalizing power, which may also be described as mythical or mythological, bearing in mind that, according to Roland Barthes, the fundamental principle of myth is to turn history into nature.<sup>3</sup>

A historical study of the concept of *generation* thus comprises a historical critique of its discursive power and effectiveness—a critique that might even be directed towards the general agreement that sociopolitical generations do in fact exist. This kind of reification occurs not only in the “emphatic overdetermination”<sup>4</sup> of birth cohorts in popular books on *generations*, for example

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1. Karl Mannheim, “Das Problem der Generationen,” in *Wissenssoziologie: Auswahl aus dem Werk*, ed. Kurt H. Wolff (Berlin/Neuwied: Luchterhand, 1964), 509–565. All translations from German texts are my own.

2. Ex. 3:15.

3. “Nous sommes ici au principe même du mythe: il transforme l’histoire en nature” (Roland Barthes, *Mythologies* [Paris: Seuil, 1957], 203).

4. Bernd Weisbrod, “Generation und Generationalität in der Neueren Geschichte,” *Aus Politik und Zeitgeschichte* 8 (2005): 3–9; 4 (“emphatische Überdetermination”).

Douglas Coupland's *Generation X*, Florian Illies's *Generation Golf*, or Martin Reichert's rather whimsical *Generation Umhängetasche* ("Generation Shoulder Bag").<sup>5</sup> It is also shared in large parts of the sociological and sociohistorical literature on *generations*, where Mannheim's distinctions are used as a more or less self-explanatory reference point in order to identify *generations* as agents in history and society.<sup>6</sup> Moreover, *generations* are being identified and reified in current economic and ecological debates, in which "intergenerational transfers" are discussed on a demographic level, in which "intergenerational justice" has become an ethical principle for so-called sustainable policies, and in which "future generations" are invoked as if they are actual political subjects.<sup>7</sup>

The study of *generation* as a concept proceeds in a certain contrast to these common uses. Researchers have questioned whether *generations* can be said to be "identical" at all,<sup>8</sup> and have turned their attention to the manifold ways in which *generations* are constructed in different historical and cultural contexts.<sup>9</sup> This constructedness not only regards the sociological, but also the biological level of the concept. For even if it is quite incontestable that there is something

5. Douglas Coupland, *Generation X: Tales for an Accelerated Culture* (New York: St. Martin's Press, 1991); Florian Illies, *Generation Golf: Eine Inspektion* (Berlin: Argon, 2000); Martin Reichert, *Wenn ich mal groß bin: Das Lebensabschnittsbuch für die Generation Umhängetasche* (Frankfurt: Fischer, 2008).

6. To name but a few recent examples: Michael Wildt, *Generation des Unbedingten: Das Führungskorps des Reichssicherheitshauptamtes* (Hamburg: HIS Verlag, 2002); Jean-François Sirinelli, *Les baby-boomers: Une génération 1945–1969* (Paris: Fayard, 2003); Manuel Menéndez Alzamora, *La generación del 14: Una aventura intelectual* (Madrid: Siglo XXI de España, 2006); Mario Avagliano, *Generazione ribelle: Diari e lettere dal 1943–1945* (Torino: Einaudi, 2006); Laurel Cohen-Pfister, ed., *Generational Shifts in Contemporary German Culture* (Rochester, N.Y.: Camden House, 2010).

7. Cf. John E. Roemer, ed., *Intergenerational Equity and Sustainability* (Basingstoke: Palgrave Macmillan, 2007); Jörg Tremmel, ed., *Demographic Change and Intergenerational Justice: The Implementation of Long-Term Thinking in the Political Decision Making Process* (Berlin: Springer, 2008); Janna Thompson, *Intergenerational Justice: Rights and Responsibilities in an Intergenerational Polity* (New York: Routledge, 2009).

8. Lutz Niethammer, "Sind Generationen identisch?" in *Generationalität und Lebensgeschichte im 20. Jahrhundert*, Jürgen Reulecke, ed. (Munich: Oldenbourg, 2003), 1–16.

9. "Nicht die Frage, ob es so etwas wie Generation und Generationen gibt, gilt es also zu analysieren, sondern in welcher Weise und mit welchem Interesse ihr Vorhandensein jeweils deklariert oder konstruiert wird" (Ohad Parnes, Ulrike Vedder, and Stefan Willer, *Das Konzept der Generation: Eine Wissenschafts- und Kulturgeschichte* [Frankfurt: Suhrkamp, 2008], 20). Cf. also Hartwin Brandt, Maximilian Schuh, and Ulrike Siewert, eds., *Familie—Generation—Institution: Generationenkonzepte in der Vormoderne* (Bamberg: University of Bamberg Press, 2008); Lutz Niethammer, "Die letzte Gemeinschaft: Über die Konstruierbarkeit von Generationen und ihre Grenzen," in *Historische Beiträge zur Generationsforschung*, Bernd Weisbrod, ed. (Göttingen: Wallstein, 2009); Björn Bohnenkamp, Till Manning, and Eva-Maria Silies, eds., *Generation als Erzählung: Neue Perspektiven auf ein kulturelles Deutungsmuster* (Göttingen: Wallstein, 2009).

real, factual, and natural about *generations*—namely, sexual reproduction—the knowledge about these generative facts of life is still something cultural, and thus historical in itself. Consequently, a cultural history of the concept of *generation* must include the scientific part of the problem in order to be comprehensive.<sup>10</sup> Hence it can be shown, for instance, that Mannheim’s classic essay has to be read within the discursive context of the 1910s and 1920s, in which sociological and biological questions were closely intertwined in such a way that the concept of *generation* was at the core of debates about “social heredity” and “vital laws of culture.”<sup>11</sup>

A series of questions thus emerges: Which historical changes and developments within the various constructions of *generations* gave rise to such an extensive cultural interpretation of the concept as we know today? Which transfers between life science and sociopolitical, philosophical, and pedagogical discourses occurred so that the model of generations could be used to make sense of historical change? And how can these transfers be described in terms of conceptual history?

In what follows, I will try to elucidate this set of problems by tracing the modern conceptual history of *generation*, whose point of departure has to be situated not in the 1920s but in the late eighteenth century. This is the time when intergenerational relationships were being conceived of as the paradigmatic confrontation between obsolete and innovative political orders. Especially in the French and American revolutions, the “new,” “forthcoming,” or “future generation” was invoked against any logic of the *ancien régime*. It was essential for the masterminds of these revolutions to deny the right of any present generation to subject future generations to its laws. Such denial is, quite literally, article 28 of the French *Declaration of Human and Civil Rights* from 1793.<sup>12</sup> Likewise, Thomas Paine in his 1795 *Dissertation on the First Principles of Government*<sup>13</sup> claimed that “a nation, though continually existing, is continually in a state of renewal and succession.... In this ever running flood of generations there is no part superior in authority to another.... If we think otherwise than this we think either as slaves or as tyrants. As slaves, if we think that any former generation had a right to bind us; as tyrants, if we think that we have authority to bind the generations that are to follow.”<sup>14</sup>

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10. This is the general approach of Parnes, Vedder, and Willer, *Das Konzept der Generation*, and of Sigrid Weigel, *Genea-Logik: Generation, Tradition und Evolution zwischen Kultur- und Naturwissenschaften* (Munich: Fink, 2006).

11. Parnes, Vedder, and Willer, *Das Konzept der Generation*, 218–59.

12. *Déclaration des droits de l’homme et du citoyen*, June 1793, art. 28: “Une génération n’a pas le droit d’assujettir à ses Lois les générations futures.”

13. Thomas Paine, “Dissertation on the First Principles of Government,” in *The Thomas Paine Reader*, Michael Foot and Issac Kramnick, eds. (London: Penguin, 1987), 452–70.

14. *Ibid.*, 456–57.

However, it is important to note that the logic of the *ancien régime* can in itself be understood as an intergenerational logic, namely that of the transfer of power, wealth, and influence (and of course also of powerlessness and poverty) from generation to generation. Obviously, intergenerational relationships can be regarded as exemplary for both continuity and conflict. This is precisely where the interpretative potential of *generation* resides. Even if one puts the emphasis on innovation, there remains a close relation between what is considered novel on the one hand, and its origin on the other. Progenitors, propagation, and progeny are interlinked inextricably. And this still holds true for the political discourses of the late eighteenth century, underlining generational conflicts as the actual norm of the relation between generations.

This eighteenth-century conceptual dialectics of continuity and change can also be found in the field of contemporaneous physiological knowledge about *generation*, in the sense of procreation, of engendering and conceiving new life. The beginning of the modern political concept of *generation*, at least, correlates with contemporaneous generational theories in embryology. *The Theory of Generation*—such is the title of an important book, published by the German embryologist Caspar Friedrich Wolff, first in Latin (1759), then in German (1764). While previous authors had claimed that all life forms were being preformed in the germ, and that conception was only about triggering the process of coming into being, Wolff was one of the forerunners of the highly influential model of *epigenesis*, meaning the successive self-organization of new life from an originally unorganized and fluid generative matter to which a specific force has to be added in order to distribute the generative matter before its solidification and formation, so that new individual life forms can be produced. In the epigenetic theory, the dialectic of continuity and innovation was crucial. Only with the paradigm of *epigenesis* did it first become possible to adequately formalize the meaning of the procreative act itself—and with it, for instance, an individual's similarities with his parents on both sides.<sup>15</sup>

Nonetheless, this new concept of *engendering* was characterized by a distinct vagueness regarding the true determinative relation between the generations. On the one hand, the similarity between parents and offspring was an empirically evident fact. But on the other, the actual physiological agent of individuality—that which the embryologists designated as “essential force”<sup>16</sup>

15. Cf. Elizabeth K. Gasking, *Investigations into Generation 1651–1828* (London: Hutchinson, 1967); Shirley A. Roe, *Matter, Life, and Generation: Eighteenth-Century Embryology and the Haller-Wolff Debate* (Cambridge: Cambridge University Press, 1981); Mary Terrall, “Speculation and Experiment in Enlightenment Life Sciences,” in *Heredity Produced: At the Crossroads of Biology, Politics, and Culture, 1500–1870* (Cambridge: Cambridge University Press, 2007), 253–75.

16. The corresponding Latin and German expressions are *vis essentialis* and *gewisse Kraft*.

or “building force”<sup>17</sup>—remained a thoroughly enigmatic and even numinous category. The prominence of generation as a theoretical form in eighteenth-century physiology coincides with the fact that an indeterminacy was postulated at the core of the generative process. The very idea of *epigenesis* has to do with this indeterminacy. In the epigenetic way of thinking, engendering becomes a potency in the true sense: an ability and a power. The accompanying theoretical strategy is one of a dynamization and virtualization of a previously more mechanically interpreted process.

This concept manifested itself in one of the first philosophical explorations of the new epigenetic paradigm of *generation*: in Johann Gottfried Herder’s *Reflections on the Philosophy of the History of Mankind* (1784), especially in his chapter on the “genetic force” as “mother of all culture on earth”—the term *genetic* not being a precursor of modern genetics, but signifying the natural process of coming into being in general.<sup>18</sup> Herder explicitly referred to Caspar Friedrich Wolff’s *Theory of Generation* when trying to characterize the operations of this “force,” which he supposed was effective throughout nature and history. Consequently, Herder’s text as a whole is filled with *gen*-words: *generation*, *genesis*, *genetic*, and *genius* appear again and again, often connected to the German word *Geschlecht*, which, in an Aristotelian fashion, also means *genus* and *sex* at the same time: the whole of the human race and sexuality as the basis of its existence and procreation. That the idea of *genius* especially plays a decisive role in these transformations is articulated by Herder in the above-mentioned chapter, through an explicit identification of genetic force and internal inborn genius: “This faculty [of living] is inborn, organic, genetic: it is the ground of my natural forces, the inner genius of my being.”<sup>19</sup>

Despite the empirical knowledge cited in the footnotes, Herder’s discourse is thoroughly marked by a rhetoric of potentiality. The enthusiastic, almost rhapsodic discourse persistently alternates between the subjunctive and the indicative, simultaneously accentuating the miraculous character of procreation as well as its reality, and thus stressing unobservability and observability at the same time.

Caspar Friedrich Wolff, *Theoria generationis/Theorie von der Generation* (Hildesheim: Olms, 1966 [1759/1764]), 13; 37.

17. For “building” or “formative force,” cf. Johann Friedrich Blumenbach, *Über den Bildungstrieb und das Zeugungsgeschäfte* (Göttingen: Dieterich, 1781).

18. Johann Gottfried Herder, “Ideen zu einer Philosophie der Geschichte der Menschheit,” in *Werke*, Martin Bollacher, ed., vol. 6 (Frankfurt: Deutscher Klassiker Verlag, 1989). Cf. John H. Zammito, “Epigenesis: Concept and Metaphor in J.G. Herder’s *Ideen*,” in *Vom Selbstdenken: Aufklärung und Aufklärungskritik in Johann Gottfried Herder’s Ideen zur Philosophie der Geschichte der Menschheit*, Regine Otto and John H. Zammito, eds. (Heidelberg: Synchron, 2001), 131–45.

19. “Angeboren, organisch, genetisch ist dies Vermögen: es ist der Grund meiner Naturkräfte, der innere Genius meines Daseins” (Herder, “Ideen,” 273).

Whoever witnessed the miracle of the creation of a living being for the first time, how amazed he would be! From small pellets between which juice shoots, a living point arises and from this point a creature of the earth generates itself.... What would he who witnessed this miracle for the first time call it? He would say that is a living, organic force; I know not from where it has come nor what lies in its interior. But that it is there, that it lives, that the organic parts are appropriated from the chaos of a homogeneous matter, that I see, that is undeniable.<sup>20</sup>

In spite of this “undeniable” evidence, Herder uses the word *gleichsam* (meaning “quasi” or “as it were”) twice when referring to the relation between “genetic force” on the one hand and the effects it actually produces on the other. He states that each of the organic parts is formed “quasi in an act, as an effect of its own,”<sup>21</sup> and he understands the “invisible force” of epigenesis as a “quasi-manifestation of its inner nature.”<sup>22</sup> Indeed, in the face of analogical resemblances—between parents and offspring—produced through a more or less numinous force which bears divergent, if not contradictory adjectives (genetic, epigenetic, organic, procreative, formative, essential, vital), one could attribute a certain metaphoricity to this very force itself.

Regarding the calculated circuitousness of Herder’s terminology, as well as his affinity to epigenetic theories, it is a little surprising that the word *epigenesis* occurs just once in the extensive text—and that it is not affirmed but judged rather skeptically. To speak of *epigenesis* was, according to Herder, not a proper use of words because, given the signification of the Greek prefix *epi-* (meaning “besides,” “upon,” “nigh”), it evoked the idea that the parts of a growing organism accrued to it from its outside.<sup>23</sup> This, he stated, was just as improper as to say, as the preformationists among the embryologists did, that any growth was just about the development of preexisting germs. Therefore, Herder preferred the term *genesis*, although his definition of it in the same passage is certainly directed towards the theory of epigenesis. Herder’s objection is not about Wolff’s concept, but about the word for this concept. The critique of the improper use is indeed a critique of semantics and of style; es-

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20. “Wer zum erstenmal das Wunder der Schöpfung eines lebendigen Wesens sähe: wie würde er staunen! Aus Kügelchen, zwischen welchen Säfte schießen, wird ein lebender Punkt und aus dem Punkt erzeugt sich ein Geschöpf der Erde.... Wie würde der, der dies Wunder zum erstenmal sähe, es nennen? Da ist, würde er sagen, eine *lebendige, organische Kraft*; ich weiß nicht, woher sie gekommen? noch was sie in ihrem Innern sei? aber daß sie da sei, daß sie lebe, daß sie organische Teile sich aus dem Chaos einer homogenen Materie zueigne, das sehe ich, das ist unleugbar” (ibid., 270–71).

21. “Gleichsam actu, in eigner Wirkung” (ibid., 272).

22. “... daß die unsichtbare Kraft ... sich ihrer innern Natur nach gleichsam nur offenbare” (ibid.).

23. “... daß die Glieder von außen zuwachsen” (ibid., 172).

pecially since it deals with the status of metaphorical expressions. It is indeed remarkable that Herder tried to solve this metaphorological problem simply by deleting the prefix *epi-*. As it was about something elementary, he needed a simple word. *Epi-*, evoking something additional, outward, or supplementary, had to be left out, because essential force was supposed to come from within.

Nevertheless, for Herder, terminological reduction was not the only way to cope with the problem. The other was translation. In this very same passage, he transferred the Greek word *genesis* into the German word *Bildung*, which signifies at first “growing into a shape” or “forming.” Moreover, Herder denoted the way in which force organizes itself in matter with a neologism related to *Bildung*, namely the verb *zubilden* (which can be translated as something like “toward-forming”).<sup>24</sup> *Bildung*, again, was exactly the point where he enriched the concept of *growth* with the concept of *learning and education*. Indeed when we use the German word *Bildung* today in everyday language we only think of it in the latter meaning. Herder’s text is in fact one of the important transfer points in the eighteenth century where this semantic shift from growth to education begins, and where consequently both meanings are involved when the word is used.<sup>25</sup>

Rhetorically, this is realized in close parallels where *Bildung* and related words are used for both body and mind, thus marking a kind of identity without denying the differences. For instance, Herder calls the organized human body *das Gebilde*, as far as its “genetic disposition” is concerned,<sup>26</sup> but in the same passage he claims that in order to become human beings we are dependent on resources for *Bildung* that do not come from within, but are situated around us.<sup>27</sup> Herder even speaks of a “genesis of mind” or “second genesis.”<sup>28</sup> This version of the genetic principle has to do with continuities, transmissions, and changes in the long term, that is, in culture and tradition. It is quite compelling to term this kind of transfer “epigenetic” again, even if Herder himself did not draw this conclusion. In fact, constructing an order of first and second genesis and localizing one kind of *Bildung* within us and another one around

24. Ibid.

25. Makoto Hamada, “Die Vielschichtigkeit der Begriffe ‘Bildung’ und ‘Bild’ in den ‘Ideen,’” in *Vom Selbstdenken*, 165–75. Cf. Ilse Schaarschmidt, “Der Bedeutungswandel der Begriffe ‘Bildung’ und ‘bilden’ in der Literaturepoche von Gottsched und Herder,” in *Beiträge zur Geschichte des Bildungsbegriffs*, Franz Rauhut, ed. (Weinheim: Beltz, 1965), 25–87; Rudolf Vierhaus: “Bildung,” in *Geschichtliche Grundbegriffe: Historisches Lexikon zur politisch-sozialen Sprache in Deutschland*, vol. 1, Otto Brunner, Werner Conze, and Reinhart Koselleck, eds. (Stuttgart: Klett-Cotta, 1972), 508–551.

26. “Genetische Disposition,” in Herder, “Ideen,” 345.

27. “Hilfsmittel der Bildung um uns” (ibid.).

28. “Geistige Genesis,” “zweite Genesis” (ibid.).

us means reinstalling a logic of the epigenetic, even though Herder's intention was to exclude it from his thinking on "genetic force."

*Bildung*, for Herder, guaranteed the translatability from nature into culture and vice versa. This is a general finding for pedagogical debates about genesis, epigenesis, and intergenerational relationships in the late eighteenth century. In Immanuel Kant's lectures on pedagogy from the 1780s, for instance, the German word *Generation* can be found to designate this same intersection of natural growth and a culturally defined system of education.<sup>29</sup> Following the ideal of the progressive perfection of mankind, the generation as such is said to be the protagonist of this process, which is both historical and natural. Kant writes: "The human race is supposed to bring out the complete natural disposition of mankind, gradually and by its own effort. One generation educates the other."<sup>30</sup> The relevant actors being not individuals (educating or educated) but generations, pedagogy turns out to be the institution that protects the intergenerational aspiration, in order to prevent that "one generation demolish[es] what the other has already built up."<sup>31</sup> It is in generations that mankind evolves—"gradually," in the long run, but in an unstoppable progress towards the future:

Maybe education is going to improve, and every following generation will be one step closer to the perfection of mankind; for behind education there lies the great secret of the perfection of human nature. This can happen from now on.... Education is an art whose exertion has to be brought to perfection through many generations. Every generation, provided with the knowledge of its forerunners, can more and more achieve an education that develops all of the natural dispositions of man in due proportions, thus leading the human race to its destination.<sup>32</sup>

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29. Immanuel Kant, "Über Pädagogik," in *Werke in zehn Bänden*, vol. 10, Wilhelm Weischedel, ed. (Darmstadt: Wissenschaftliche Buchgesellschaft, 1983), 693–761. Cf. Jutta Ecaris, *Generation, Erziehung und Bildung: Eine Einführung* (Stuttgart: Kohlhammer, 2008), 13–20; Michael Lausberg, *Kant und die Erziehung* (Marburg: Tectum, 2009).

30. "Die Menschengattung soll die ganze Naturanlage der Menschheit, durch ihre eigne Bemühung, nach und nach von selbst herausbringen. Eine Generation erzieht die andere" (ibid., 697).

31. "Eine Generation möchte [sonst] niederreißen, was die andere schon aufgebaut hätte" (ibid., 704).

32. "Vielleicht, daß die Erziehung immer besser werden, und daß jede folgende Generation einen Schritt näher tun wird zur Vervollkommnung der Menschheit; denn hinter der Edukation steckt das große Geheimnis der Vollkommenheit der menschlichen Natur. Von jetzt ab kann dieses geschehen.... Die Erziehung ist eine Kunst, deren Ausübung durch viele Generationen vervollkommnet werden muß. Jede Generation, versehen mit den Kenntnissen der vorhergehenden, kann immer mehr eine Erziehung zu Stande bringen, die alle Naturanlagen des Menschen proportionierlich und zweckmäßig entwickelt, und so die ganze Menschengattung zu ihrer Bestimmung führt" (ibid., 700, 702).

“From now on,” “more and more”: these expressions of futurity can be found in many pedagogical writings of the late eighteenth century. The German novelist and essayist Jean Paul, in his pedagogical treatise *Levana* (1806),<sup>33</sup> combined this kind of futurization with poetic inventiveness and romantic enthusiasm for children and childhood. It is only children, Jean Paul wrote, who “in a higher sense than they have hitherto been used for, are able to catch sight of future and truth in the crystal ball.”<sup>34</sup> But Jean Paul also showed the temporal paradoxes arising from this tendency towards radical progression. “In the childhood world,” he states in his first paragraph (“On the Importance of Education”), “we see all of posterity standing in front of us ... while at the same time it restores the regenerated antiquity, after which we were to appear.”<sup>35</sup> From this complicated temporality results an essential uncertainty of future, for no educator ever knows whether his pupil will turn out to be “a future prince of hell or a guardian angel of mankind.”<sup>36</sup> Given this uncertainty, the pedagogical desire to control the future by means of education proves to be a problematic fantasy of intergenerational omnipotence.

Such pedagogical concepts of the always radically new “childhood world” were clearly inspired by earlier doctrines of an original and natural potential for development in every child. Already in Jean-Jacques Rousseau’s novelistic treatise *Émile; or, On Education* (1762) the child was compared to a plant growing in its own right. In the late eighteenth and early nineteenth centuries, this idea of a genuine urge to grow was adapted to the up-to-date vocabulary of physiological and embryological theories of *generation*. Thus Jean Paul spoke of the “development of the mental building force.”<sup>37</sup> Likewise, Kant mentioned the “many germs in mankind” and the pedagogical responsibility to “develop the natural dispositions in due proportions and to unfold mankind from its germs.”<sup>38</sup>

In the institutionalization of pedagogical reforms during the first decades of the nineteenth century, the programmatic formulae of generative “germs” and “forces” gained a different status. The emphatic invocations of birth, growth, and development turned into more pragmatic discussions about how

33. Jean Paul, “Levana oder Erziehlehre,” in *Sämtliche Werke*, Norbert Miller, ed. (Munich: Hanser 1960–1985), vol.1, 5, 515–874.

34. “Nur sie können in einem höhern Sinn, als wozu man sonst Kinder gebrauchte, in dem Zauberkristall die Zukunft und Wahrheit schauen” (ibid., 532).

35. “In der Kinderwelt steht die ganze Nachwelt vor uns ...; und zugleich erneuert sie uns die verjüngte *Vorwelt*, hinter welcher wir erscheinen mußten” (ibid., 533).

36. “... ob er nicht einen künftigen Höllengott der Menschheit, oder einen Schutz- und Lichtengel derselben vor sich habe ...” (ibid., 533–34).

37. “Entwicklung des geistigen Bildungstriebes” (ibid., 825).

38. “Es liegen viele Keime in der Menschheit, und nun ist es unsere Sache, die Naturanlagen proportionierlich zu entwickeln, und die Menschheit aus ihren Keimen zu entfalten” (Kant, “Über Pädagogik,” 701).

the concept of *generation* could be understood as a relevant factor within the two historically new institutions responsible for education: the modern state on the one hand and the bourgeois nuclear family on the other. It was especially pertinent in post-Napoleonic Prussia, where the double educational interest of state and family was promoted, where the formula coined by the famous Prussian jurist Friedrich von Savigny was clearly inspired by epigenetic thought: “It is in families that the germs of the state are contained, and the developed state has the families, not the individuals, as its immediate constituents.”<sup>39</sup> Likewise, in the lectures on the *Foundations of Pedagogy* given by the theologian and educational reformer Friedrich Schleiermacher at the recently founded Berlin University in the 1820s, the interrelations of state and family were of major interest.<sup>40</sup> According to Schleiermacher, pedagogy is based on a theory of generation whose central question reads: “What is it actually that the elder generation wants to do with the younger one?”<sup>41</sup>

By declaring that the relation of “elder” and “younger” generations is the point of departure for each and every kind of pedagogical reflection, Schleiermacher emphasizes the purely relational character of the concept of *generation*—in contrast to its more traditional uses, for example as a fixed term in genealogy or in the calculation of time (with three generations adding up to a century). Schleiermacher’s dichotomous generational logic has far-reaching theoretical consequences. He even states that there are always only two generations at a time: all human beings belonging to “one cycle of time” can be “separated into the elder and the younger generation, the elder always being sooner to depart from the earth.”<sup>42</sup> From the outset, Schleiermacher makes quite clear that the pedagogical concept of generation is based on an idealized model which has very little to do with the empirical asynchronicity of births and deaths or with the seriality and countability of generations in its genealogical meaning.

The abstract duality of generations in Schleiermacher points to the duality or difference of gender (*Geschlechtsdifferenz*).<sup>43</sup> In the German language, this produces a semantic ambiguity. Since *Generation* in eighteenth- and nineteenth-

39. “In den Familien nun sind die Keime des Staats enthalten, und der ausgebildete Staat hat die Familien, nicht die Individuen unmittelbar zu Bestandteilen” (Friedrich Carl von Savigny, *System des heutigen Römischen Rechts* [Berlin: Veit 1840], vol. 1, 343–44).

40. Cf. Ecarus, *Generation, Erziehung und Bildung*, 21–29.

41. “Was will denn eigentlich die ältere Generation mit der jüngeren?” (Friedrich Schleiermacher, “Grundzüge der Erziehungskunst,” in *Texte zur Pädagogik: Kommentierte Studienausgabe*, Michael Winkler and Jens Brachmann, eds. [Frankfurt: Suhrkamp, 2000], vol. 2, 9).

42. “... so, daß alle, welche gleichzeitig einem Zyklus angehören, immer geteilt werden können in die ältere und die jüngere Generation, von denen die erste immer eher von der Erde scheidet” (ibid.).

43. Ibid., 69.

century German remains a “foreign word,” that is, a loanword clearly betraying its Latin roots, it is often replaced by the German word *Geschlecht*—which at the same time means “sex” and “gender.” Beyond this colloquial translatability, Schleiermacher explicitly and repeatedly traces intergenerational relations as such back to sex and gender relations. For instance, when in the introductory passages he discusses the problem of the exact biographical starting point of generational interactions, he suggests that human life in itself has no beginning but is always already transferred: being the “product” of a generative “act” between two other “determined beings.”<sup>44</sup> Conversely, it is in gender difference that Schleiermacher’s extensive “introduction” to the *Foundations of Pedagogy* culminates, namely, in discussing the problem “whether education should be the same for both sexes/genders.”<sup>45</sup> Thus, the equivocal combination of generation and gender occupies a decisive place in differentiating both male from female and elder from younger. The concept of *generation* motivates reflections about gender relations as well as about age relations.

Another highly relevant pedagogical distinction concerns the unity or plurality of each generation. According to Schleiermacher, the “educating generation” can be seen as a whole, whereas the generation that is “to be educated” is decomposed into singular entities.<sup>46</sup> Yet this distinction is further differentiated when Schleiermacher continues that the unity of the elder generation is given only if education is “a matter of the public and the community.” If, on the other hand, education is “a matter of family and domestic life,” education only appears in particular forms.<sup>47</sup> Familial education thus contradicts the concept of educational unity and totality. In fact, the family in Schleiermacher’s pedagogy is the origin of social inequality; it is the part of social life where “the principle of inequality” is continuously reproduced.<sup>48</sup>

Thus a fundamental opposition between familial and nonfamilial education can be construed. The state and its pedagogical institutions would be responsible for correcting the familial principle of inequality. Indeed, Schleiermacher—who was one of the protagonists of the Prussian educational reform in the 1810s and 1820s—dedicates a great deal of his *Foundations of Pedagogy* to the role of schools and universities. However, he refrains from demanding

44. “Das Leben des einzelnen Menschen sei gar kein reiner Anfang, sondern knüpfe sich seiner Erscheinung nach an den Akt zweier anderen Menschen, die schon ein bestimmtes Sein haben, sei also Produkt dieses Aktes” (ibid., 19).

45. “Ob und inwieweit die Erziehung dieselbe sei für beide Geschlechter,” (ibid., 68).

46. “Wir wollen annehmen, die erziehende Generation bilde schon eine Gesamtheit und könne als Eins angesehen werden. Aber die zu erziehende Generation ist keineswegs eine Gesamtheit; sondern zerfällt, je früher wir sie ins Auge fassen, in einzelne” (ibid., 23).

47. “... ein Werk der Öffentlichkeit und des Gemeinwesens ..., das Werk der Familie und des häuslichen Lebens” (ibid.).

48. “Das Prinzip der Ungleichheit” (ibid., 168).

a general nationalization of education. The state, he says, should not interfere with the initial educational period, which still belongs to the families. But it is important to note that the family in these reflections is not understood to be an autonomous (apolitical, asocial) protected space, but rather that it is itself open to larger communities. For Schleiermacher, this is already true for the infant's earliest intimate and emotional attachments. The mother-child relationship especially should not be too exclusive, but should open up to community and society. Motherly love is not a specific or even a sacred kind of love, but a starting point for all kinds of love: "a love relationship widening step by step; that way, a mutual love is developing which is the foundation of all ethos and of the whole moral being."<sup>49</sup>

But these exchanges between family and society may always turn out to be problematic—for example when the essentially physical role of the mother in very early childhood has to be supplemented by a wet nurse. Schleiermacher even considers a possible transfer of negative characteristics via breast milk. As most wet nurses are rather uneducated women, he writes, problems of *Bildung* may result from breastfeeding, since it is "by milk that the disposition to certain states of mind passes over to the child."<sup>50</sup> There is obviously a great deal of worry implied in the possibility that "the children become like the wet nurses."<sup>51</sup> If this is really the case—and for Schleiermacher, it is—then this has consequences for the transition from familial to social intergenerationality. The substitution of a professional nurse for the mother marks the first societal influence on the family by way of the social division of labor. Hence, it is very plausible that Schleiermacher adds the following general finding to his very specific ideas about breast milk: "If we compare the different classes of society, we find many ethical restrictions partly propagating themselves to the following generation."<sup>52</sup>

By thus comparing different ways of propagation, Schleiermacher manifests the central thought of his pedagogical concept of *generation*: the relation between generations within families and within societies is supposed to be one of mutual representation. This leads to a socialization of the family on the one hand, and to a familialization of the society on the other, or more fundamen-

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49. "So kommt das Kind vermöge seiner Liebe zur Mutter und vermöge des Verhältnisses anderer zu dieser, in ein Verhältnis der Liebe, das nach und nach sich erweitert; es entwickelt sich so allmählich eine gemeinsame Liebe, und diese ist das Fundament aller Gesinnung und des ganzen sittlichen Daseins" (ibid., 196–97).

50. "... so möchte man voraussetzen, daß durch die Milch auch die Anlage zu gewissen Gemütszuständen in das Kind übergeht" (ibid., 189).

51. "Es werden die Kinder den Ammen ähnlich" (ibid.).

52. "Vergleichen wir die verschiedenen Klassen der Gesellschaft, so finden wir vielfach ethische Beschränkung, die sich zum Teil auf die folgende Generation fortpflanzt" (ibid., 189).

tally a potential naturalization of all kinds of community. On one of the first pages of his lectures Schleiermacher claims: “The concept of community is none other than the concept of genus.”<sup>53</sup> The state, being the supreme authority of this pedagogy, not only guarantees but also epitomizes this maximum range of community concepts, based on *generation* and reaching from *genus* to *society*. It is not inconceivable that the state’s responsibility for education will be made complete in order to cover all the generative and generational relations in families and larger communities: “Even if the forthcoming generation belongs to the family first, as it is being born within the family, still the state might say: it is born for me, so I must determine if and to what extent the parents may guide the education.”<sup>54</sup>

This is an echo of more radical pedagogical programs of generation, as they were formulated in revolutionary France in order to initiate an *éducation nationale*, understood as national reeducation. In Condorcet’s 1792 *Report on the General Organization of Public Instruction*,<sup>55</sup> the generation appears as the central pedagogical notion and the impulse of social progress—beyond families, which on the contrary represent the inequalities of the *ancien régime*. Condorcet suggests that what is needed is to “finally cultivate, in every generation, the physical, intellectual, and moral faculties.”<sup>56</sup> If the generation as such becomes the object of the instruction—thanks to a national pedagogical system—then the synchronic totality of mankind is going to be educated. The generation in terms of a cohort of peers is instrumentalized for a diachronic program of political progress. “For it is not about educating children or adults, but about teaching a whole generation, about perfecting human reason.”<sup>57</sup>

Expressions of futurity thus dominated the political impact of the “new” and “forthcoming” generations. Since in revolutionary and republican discourses and practices intergenerational transfers ceased to be a model of safeguarding and perpetuating the status quo, they were rather understood as the mainspring of social discontinuity and change. Thus, for revolutionary thinkers it was important to somehow formalize and regulate generational change. In his already cited 1795 *Dissertation on the First Principles of Government*,

53. “Der Begriff der Gemeinschaft ist kein anderer als der der Gattung” (ibid., 10).

54. “Wenn auch die künftige Generation der Familie zunächst angehört, als in ihr geboren, so könnte der Staat doch sagen, sie wird für mich geboren, und also muß ich bestimmen, ob und inwieweit die Eltern die Erziehung leiten sollen” (ibid., 66).

55. Condorcet (Jean-Antoine-Nicolas de Caritat), “Rapport sur l’organisation générale de l’instruction publique,” in *Œuvres*, A. Condorcet O’Connor and M. F. Arago, eds. (Paris: Didot, 1847–1849), vol. 7, 449–529.

56. “Cultiver enfin, dans chaque génération, les facultés physiques, intellectuelles et morales” (ibid., 450).

57. “Ce n’est plus de l’instruction particulière des enfants, ou même des hommes, qu’il s’agit, mais de l’instruction de la génération entière, du perfectionnement général de la raison humaine” (ibid., 501–502).

Thomas Paine even designated the generation as a category of political arithmetic, i.e., as a ratio for organizing political change:

The father, the son, the grandson are so many distinct generations. But when we speak of a generation as describing the persons in whom legal authority resides, as distinct from another generation of the same description who are to succeed them, it comprehends all those who are above the age of twenty-one years, at the time that we count from; and a generation of this kind will continue in authority between fourteen and twenty-one years, that is, until the number of minors, who shall have arrived at age, shall be greater than the number of persons remaining of the former stock.<sup>58</sup>

Accordingly, some twenty years later Thomas Jefferson wrote that one might even “consider each generation as a distinct nation, with a right, by the will of its majority, to bind themselves, but none to bind the succeeding generation, more than the inhabitants of another country.” Jefferson, too, suggested an arithmetic way of formalizing this generational critique of legislation. Influenced by private contract law, he postulated a period of nineteen years, after which “the majority of the contractors are dead, and their contract with them.”<sup>59</sup>

Around 1800, the model of forthcoming generations—which stem from earlier generations but which at the same time are emphatically new—was transferable from physiological and embryological research to programs of education and of political change. In my short historical survey, I have given some evidence for these interdisciplinary correspondences or transfers. From here, the methodological question arises as to how they can be adequately described. As I have demonstrated, extreme positions should be rejected: such is the idea of causal influences as well as the assumption that there are several concepts of *generation*—in embryology, pedagogy, politics, and also aesthetics—that just happen to bear the same name, but are completely disconnected. Instead, it is on the rather abstract level of transferring several areas of knowledge into each other that the concept of *generation* becomes probably the most important conceptual instance of historical temporality around 1800, for it is in that epoch that *generation* becomes the very model of futurity.

This seems to be the common denominator of the physiological, pedagogical, and political concepts of *generation*—not only around 1800: it is in this capacity of a general model that has been fueling the modern generational discourse until today. As a general model of historical temporality, the concept of *generation* is part of the historical-conceptual transition period around 1800, the *Sattelzeit* that has been thoroughly described and analyzed by Rein-

58. Paine, “Dissertation,” 457.

59. *Ibid.*, 1281.

hart Koselleck.<sup>60</sup> However, it is important to note that for Koselleck, *generation* is also an important instance of a genuinely premodern temporality. In his essay “Neuzeit: Remarks on the Semantics of Modern Concepts of Movement,” Koselleck states that the interrelation of generations constitutes a “space of experience” (*Erfahrungsraum*) in which past and future form a conceptual continuity, in which a plurality of histories can be narrated and handed down.<sup>61</sup>

Apparently, this marks an eminent contrast to modern history, understood by Koselleck as the epitome of his “collective singulars.”<sup>62</sup> Still, the concept of *generation* around 1800 is also part of this shift to “collective singulars,” just like *progress* or *revolution*. In this sense, the *generation* becomes an entity of absolute progression. The *generation* as such bears the epithet “new.” Nonetheless, the intricate conceptual complexities arise from the fact that you can never conceive of the *generation* without thinking of intergenerational affairs, and thus of the essential plurality of generations.

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60. Cf. the examinations of both Koselleck’s “Sattelzeit” theory and his program of conceptual history in Hans Joas and Peter Vogt, eds., *Begriffene Geschichte: Beiträge zum Werk Reinhart Kosellecks* (Berlin: Suhrkamp, 2011).

61. “The histories of generations living together constituted given specific spaces of experience, out of which the histories of the future and the distant or ‘ancient histories’ could be revealed” (Reinhart Koselleck, “Neuzeit: Remarks on the Semantics of Modern Concepts of Movement,” in *Futures Past: On the Semantics of Historical Time* [New York: Columbia University Press, 1985], 231).

62. Koselleck, “Historia Magistra Vitae: The Dissolution of the Topos into the Perspective of a Modernized Historical Process,” *ibid.*, 35.