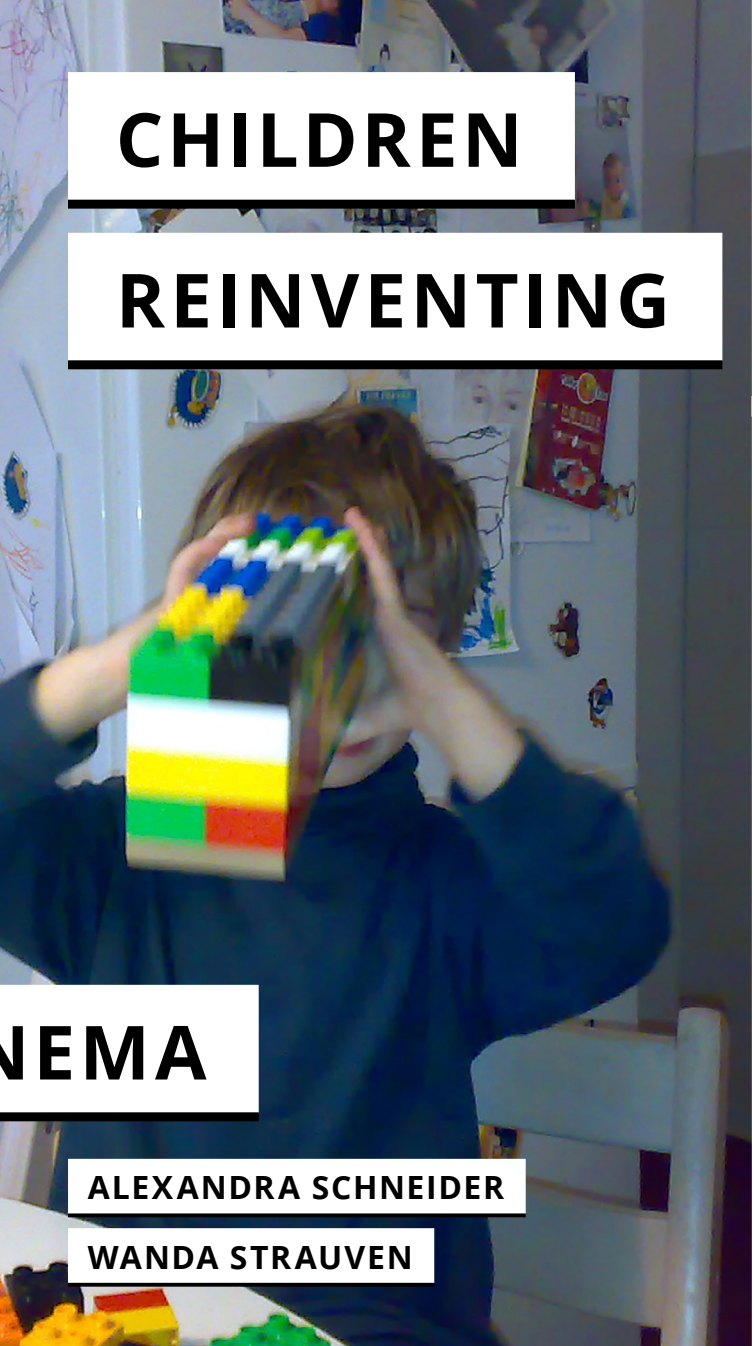

CHILDREN REINVENTING CINEMA

ALEXANDRA SCHNEIDER
WANDA STRAUVEN

CONFIGURATIONS OF FILM

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Children Reinventing Cinema

Children Reinventing Cinema: Snapshots from the Early 21st Century

Alexandra Schneider and Wanda Strauven

meson press

KONFIGURATIONEN DES FILMS

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Configurations of Film: Series Foreword

Scalable across a variety of formats and standardized in view of global circulation, the moving image has always been both an image of movement and an image on the move. Over the last three decades, digital production technologies, communication networks, and distribution platforms have taken the scalability and mobility of film to a new level. Beyond the classical *dispositif* of the cinema, new forms and knowledges of cinema and film have emerged, challenging the established approaches to the study of film. The conceptual framework of index, *dispositif*, and canon, which defined cinema as photochemical image technology with a privileged bond to reality, a site of public projection, and a set of works from auteurs from specific national origins, can no longer account for the current multitude of moving images and the trajectories of their global movements. The term "post-cinema condition," which was first proposed by film theorists more than a decade ago to describe the new cultural and technological order of moving images, retained an almost melancholic attachment to that which the cinema no longer was. Moving beyond such attachments, the concept of "configurations of film" aims to account for moving images in terms of their operations, forms and formats, locations and infrastructures, expanding the field of cinematic knowledges beyond the arts and the aesthetic, while retaining a focus on film as privileged site for the production of cultural meaning, for social action, and for political conflict.

The series "Configurations of Film" presents pointed interventions in this field of debate by emerging and established international scholars associated with the DFG-funded Graduate Research Training Program (Graduiertenkolleg) "Konfigurationen des Films" at Goethe University Frankfurt. The contributions to the series aim to explore and expand our understanding of configurations of film in both a contemporary and historical perspective, combining film and media theory with media history to address key problems in the development of new analytical frameworks for the moving image on the move.

Acknowledgments

This book would not have been possible without the children who inspired us and their parents who gave us permission to use and publish about their children's play, the objects they crafted, and the digital videos they made. We would like to thank the children for their inspiration and the parents for their generosity and trust. And we are so grateful to our own children for their imagination, love, and laughter. They grew up with their mothers working on this book, which was in the making for more than ten years.

We were also inspired by the many children we encountered by chance, on the streets and in playgrounds, on social media, and in educational film projects and workshops, like the Mini-FilmClub at the Deutsches Filminstitut & Filmmuseum (DFF), Schermi e Lavagne at the Cineteca di Bologna, the Pigneto workshop and documentary *Piccoli documentaristi* (2012) by Ludovica Fales and Nicola Moruzzi, the Burkina Faso film project *Silence, ça tourne!* (2017) documented by Pierre Sanou, the Colombian escuela audiovisual infantíl in Belén de los Andaquíes researched by Esteban Ramírez Hincapié, and the Brazilian kindergarten research project *Entre faces: infância, devir-criança e educação* (2018) by César Leite.

The idea for our joint research project originated in the Media Studies department at the University of Amsterdam, where we shared an office for several years and taught a media archaeology course together. We also benefited from the stimulating environment of the Graduate Research Training Program "Configurations of Film" at Goethe University Frankfurt, where we are both Principal Investigators, and the Film Studies section at Johannes Gutenberg University Mainz. As teachers, we would like to acknowledge all the students who gave valuable feedback and engaged with selected materials in courses at the University of Udine, Goethe University Frankfurt, Johannes Gutenberg

University Mainz, and Columbia University. Their curiosity and critical insights helped us to sharpen our thoughts.

The book gained shape thanks to the many opportunities we had to present parts of our ongoing research to an audience. We would like to thank in particular the organizers of the symposium "Imagining Media Change" (Hannover, June 13, 2013), the 9th Orphan Film Symposium "The Future of Obsolescence" (Amsterdam, March 30–April 2, 2014), the conference "Children and Nontheatrical Media: From Film to Video" (Glasgow, April 11–13, 2014), the NECS conference "Creative Energies, Creative Industries" (Milan, June 19–21, 2014), the conference "Image, histoire, langage: Carte blanche à Jacques Aumont, Michel Maire et Roger Odin" (Paris, November 11–12, 2014), the Kracauer Lectures in Film and Media Studies (Frankfurt, July 1, 2014), the XXII Udine International Film Studies Conference "A History of Cinema without Names: A Research Project" (Udine, March 18–20, 2015), the conference "#selfie: Imag(in)ing the Self in Digital Media" (Marburg, April 23–24, 2015), the lecture series "More Family Affairs" (Berlin, June 10, 2015), the NECS conference "Archives of/for the Future" (Łódź, June 18–20, 2015), the conference "Bewegtbilder und Alltagskultur(en): von Super 8 über Video zum Handyfilm. Praktiken von Amateuren im Prozess der gesellschaftlichen Ästhetisierung" (Klagenfurt, October 29–31, 2015), the 21st International Bremen Film Conference "Cinema and Childhood" (Bremen, April 27–May 1, 2016), the "Lunch-Lectures" (Mainz, December 13, 2016), the conference "Display|Disruption|Disorder" (Luzern, November 17–18, 2017), the European conference on film education "Images That Move" (Warsaw, November 21, 2017), and the seminar "FLICK: Film, Education, New Technologies" at the International Children's Book Fair (Bologna, March 26, 2018). Some conference papers resulted in early publications about our research project, for which we thank the editors involved, as they offered us the opportunity to test out our ideas in written form.

In times of corporate publishing, independent publishers such as meson press are all the more important; special thanks to their team, in particular Andreas Kirchner, who has been very patient with us. We would also like to acknowledge our copy editor Elizabeth Rankin, who engaged with our manuscript with great affinity.

Crucially, the fellowship of academic friends, mentors, PhD students, curators, confidantes, and artists has nurtured this work. Our dialogues with Thomas Elsaesser and Roger Odin, who were both key for us in our respective academic formation and research, ended abruptly. We would have loved to share the result of this project with them. Furthermore, we have been inspired by conversations with Elisa Argentesi, Giorgio Avezzù, Meredith Bak, Marie-Aude Baronian, Tina Bastajian, Edwin Carels, Rossella Catanese, Diego Cavallotti, Ilaria De Pascalis, Miriam De Rosa, Mariagrazia Fanchi, Giovanna Fossati, Laetitia Gendre, Elke Gevers, René Glas, Pepita Hesselberth, Veronica Innocenti, Marek Jancovic, Philipp Dominik Keidl, Judith Keilbach, Andrea Mariani, Kalani Michell, Paola Nocciolino, Julia Noordegraaf, Nirit Peled, Dominic Pettman, Maria Poulaki, Antoine Prévost-Balga, Michelle Quack, Christine Schuppli (†), Marc Siegel, Dan Streible, Annie van den Oever, Susanne Vincenz, Katrin Wank, and Yvonne Zimmermann.

And, finally, we are very grateful to our dear families who have supported us and our project over such a long period of time. Alexandra would like to dedicate *Children Reinventing Cinema* to Nurit, Noam, and Vinzenz, who continue to inspire her research. Wanda dedicates the book to her mother, Cecile, who witnessed the very emergence of this collective project during a stay in Paris and who continued to believe in it, enthusiastically and supportively, over the years.

Prologue

We must not forget that the most enduring modifications in toys are never the work of adults, whether they be educators, manufacturers, or writers, but are the result of children at play.
Walter Benjamin ("Old Toys," 1928)

Color-Boxing the Camera

In June 2014, at the NECS conference in Milan, we launched the beta version of our *Kinderspiel* blog with the intention to give visibility to our new research project and to invite others to contribute to it by uploading images of self-made media toys and videos by young children (Schneider and Strauven 2014). On its opening page, the blog displayed the same image as the one on this book's cover, featuring a three-year-old child operating a self-made movie camera, or at least a contraption evoking a movie camera. It is made of colorful LEGO DUPLO bricks, five layers on top of each other, forming a closed rectangular box. The child, barely clasping the huge camera between those tiny hands, holds up the gadget in front of the right eye, as if it were a recording device with a viewfinder. One could say that the functioning of this self-made device is revealed by the child's gesture, by the way the device is held close to the face. But what is the device itself telling us? Is it a camera without a view(finder), without a future? It certainly is a camera with a past, a box that belongs to the history of the camera obscura, that is, the most basic camera that captures light through a tiny aperture.

On the other hand, the LEGO camera has no pinhole. It is fully enclosed. It is a colorful black box that conceals its own "internal complexity" (or simplicity, for that matter) and asks to be

unboxed and analyzed.[1] Turning the metaphor of blackboxing into "color-boxing," we suggest understanding it as an invitation to rethink our preconceptions about cinema, to take the child seriously, and to look together through the nonexistent viewfinder.

From Children's Media Studies to Media Archaeology

The present book is conceived as a history of snapshots that shed light on the reconfiguration or reinvention of cinema by young children (up to the age of ten or eleven) at the beginning of the 21st century. Unlike other studies about children and media, this book does not focus on teaching technical skills or examining the ethical and developmental implications of media use. It also is not about children's cinema experience and consumption as "digital natives" (Ferri 2011; Mascheroni and Cuman 2014; Fanchi 2014), nor about media projects within the school context (Marsh 2012; Leite 2021; Ramírez Hincapié 2021), nor about artists working with children in a creative cinematic way, which has a long tradition—ranging from Stan Brakhage to Deedee Halleck, from Mark Cousins to Francis Alÿs, to name just a few. Rather than promising a comprehensive and complete account of children's media practices, we want to provide a conceptual framework and a series of methodological models to analyze young children's untutored or undisciplined media play.

The book argues that the future of media, and of cinema in particular, is literally in the hands of young children. More

1 We are referring to the abstract notion of blackboxing as adopted in Science and Technology Studies (STS). According to Bruno Latour, it is "the way scientific and technical work is made invisible by its own success. When a machine runs efficiently, when a matter of fact is settled, one need focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become" (1999, 304).

specifically, in five separate yet interrelated episodes, the book looks at the child's exploratory interaction with mobile media devices, such as compact cameras, mobile phones, and electronic tablets, as a new way of being in the world. Throughout their playful exploration of media, children make a less clear distinction between different modes of communication (written, spoken, and visual) than adults do. As such, they seem to confirm what Elena Marcheschi observed in the early 2010s regarding the use of the videophone, which emerged from (or within) a voice-based technology:

> The fundamental difference with regard to other types of film or video camera, and the one that partly justifies the sense of cautious attention it attracts, lies in the fact that the videophone, evolving out of the cell phone, was meant as a tool for interpersonal spoken communication, into which the experience of the image was implanted. (2010, 390)

The "merging" of telecommunication and visual culture will be picked up in Episode 2, as it is an important dimension of cinema's reinvention by children.

For the notion of snapshot, we rely on both Richard Chalfen's anthropological approach to home movies and Thomas Elsaesser's vision of film history as media archaeology. While Chalfen (1987) proposes to think of home movies as "snapshot versions of life," Elsaesser insists on the necessity to break with the linearity of (film) history and to describe it instead as "a series of discontinuous snapshots that illuminate a whole topography" (2005, 17). Even more significant is Elsaesser's recurrent emphasis on cinema's multiple origins, as a lesson from early cinema studies, and its paradoxical nature of being always "fully 'grown up' and complete in itself" and at the same "yet to be 'invented,'" following the famous dictum by André Bazin (Elsaesser 2004, 99). The fundamental idea that cinema is not yet "invented," or that it can be reinvented over and over again, forms the foundation of this book, which also takes its cue—for its title—from Miriam

16 Hansen's posthumously published essay "Max Ophuls and Instant Messaging: Reframing Cinema and Publicness," where she urges that we give the new generation of media users a chance "to rediscover and reinvent cinema" (2012b, 29). Hansen writes:

> Perhaps we should defer cultural pessimism about the digital transformations of experience and publicness for a while and give the generations growing up with these technologies a chance to incorporate them into cultural memory and, along the way, to rediscover and reinvent cinema. (2012b, 29)

Around the time Hansen's article was published, we had the impression that this was literally happening before our eyes. The "rhetoric of a break itself is nothing new," but in those years—as Hansen also observes in her essay—we were "dealing with something more fundamental," with "a palpable, seismic shift," with "the transformation of just about everything surrounding the cinema," due to "an unprecedented degree of acceleration in [the] adaptation" of electronic devices (Hansen 2012b, 22–23). It is precisely this "unprecedented degree of acceleration" that proved to be very challenging: both the technology and the children were growing too fast for us, as it were, too fast to capture in their moment and to reflect upon with a certain (historical) distance. On the other hand, our then myopic or—in Donna Haraway's (1988) phrasing—"situated" vision allowed us to take these "snapshots" from very close by, to record them while they were happening, and to now bring them together in the form of an episodic book.

Not only did our media landscape change over time; the field of media archaeology also underwent changes and took new directions. After a certain decline, there is currently a renewed interest in its methods and approaches, a revival of sorts, thanks to the work of young scholars, be it in the context of feminism, postcolonial studies, or global(izing) studies (Wen 2018; Sengupta 2020; Wynants 2020; Blaylock 2021; Morgan 2022; Galili 2024). As we will explain in more detail in Episodes 2 and 3, we are hacking

into media archaeology by putting it, literally, into children's shoes and by giving it a feminist twist. More generally, one could say we are proposing a new take on media archaeology, a more situated and more embodied one. As the journal *Feminist Media Histories* with its double issue on "Speculative Approaches" (Field 2022) evinces, within intersectional feminist methodologies there is a new urge to speculate and fabulate that opens up space for diverse epistemologies including, as we propose, those of children.

We understand our book as a contribution to the field of media archaeology, which, according to Erkki Huhtamo and Doron Galili, has "come of age" (2020, 333). Paradoxically, it is exactly this "maturity" of the field that we have in mind when we consider children as media archaeologists (as opposed to artists as media archaeologists, and researchers or curators as media archaeologists). Our media archeologists are very young and "immature," yet they can help us to reflect on the changing media culture they are growing up in. They push us to rethink the operationality of old and new media devices that they appropriate and repurpose in their play.

A more detailed reflection of our new take on media archaeology will be offered in Episodes 2 and 3, but we want to specify here that our book is also intended as a critical intervention in children's media studies beyond (or outside) the field of media archaeology. It is an intervention from a humanities perspective into a field that has been predominantly structured by research with social science methodologies, with a strong focus on media literacy and media pedagogy. Our focus, instead, is the child's free, unstructured play, outside the school context or any educational framework. The youngest children play mostly on their own, either in the close vicinity of adults or alone and unsupervised. We will also look at concrete examples of collective play and study how children negotiate rules of their media play with each other. Sometimes, as we will see, the creative exploration of media's potentialities emerges from a situation of

boredom or frustration, which the child turns into a playful situation.[2] This is also directly related to the principle of repetition in line with Walter Benjamin's play theory, as revisited by Miriam Hansen, where "play is related to experimental repetition" (Hansen 2012a, 191). Indeed, crucial for our study of the child's media play are Benjamin's efforts towards "imputing to repetition in play an existential quest for happiness" and, as far as cinema is concerned, an effect of liberation (Hansen 2012a, 184).

Walter Benjamin as Guide

The working title of our research project, *Kinderspiel*, was chosen in direct reference to Benjamin's writings on children and play. More specifically, we were inspired by Hansen's discussion of the (hyphenated) notion of *Spiel-Raum* that appears in the second version of Benjamin's famous essay "The Work of Art in the Age of Technological Reproducibility" (2006c).[3] Considered by Hansen as the "Ur-text," the second version of the essay was completed in Paris in 1936 in a form less compromised than the third and best-known version, which displays a strong rhetoric of binary oppositions rather untypical for Benjamin. In the second version, the notion of the aura is made part of a different conceptual trajectory, defined by the polarity between semblance (*Schein*) and play (*Spiel*). In a long footnote on the "significance of beautiful semblance," Benjamin writes:

2 This is, of course, not limited to today's new media. See, for instance, the collaborative book project, *Boredom Beaters*, written by two siblings who made up a series of games when their mother "went away for six weeks and left [them] with less to do" (Pettman 1985, 2).

3 In German, the term *Spielraum* is written without a hyphen, but on at least one occasion Benjamin hyphenates the term, which Hansen reads as an indication that it "has to be read in both its literal and figurative, material and abstract meanings" (Hansen 2004, 12). This is also the reason why Hansen proposes to translate the term as "room-for-play" instead of the more common translation "field of action."

> What is lost in the withering of semblance and the decay of the aura in works of art is matched by a huge gain in the scope for play [*Spiel-Raum*]. This space for play is widest in film. In film, the element of semblance has been entirely displaced by the element of play. (2006c, 127)

In our project, Benjamin's notion of *Spiel-Raum* functions first and foremost as a very literal space for children to play with old and new media devices, to explore their limits and potentialities, "and, along the way, to rediscover and reinvent cinema" (as suggested by Hansen, see quote above). Our framework is not so much defined by game studies or theories of play; instead, we are interested in how cinema is taking form, being relocated and reinvented, in the child's play. Thus, we are looking at the child's play through the lens of cinema. As such, our approach is more grounded in film studies than, for instance, Meredith A. Bak's *Playful Visions: Optical Toys and the Emergence of Children's Media Culture* (2020), which is focused on toys and their playfully educational dimension throughout history. We are also more concerned with the Benjaminian shift from *Spielzeug* (toy) to *Spielen* (playing), that is, from the object to the activity (or verb) (Benjamin 2005b).

Our interest lies in the activity of playing rather than in defining what makes a toy, not least because the notion of the toy—or more generally, as claimed by Sally Crawford (2009), the "toyness" of an object—is rather complex and even problematic. This is indeed an ambiguous lesson that can be learned from the archaeology of childhood. As we will further discuss in Episode 3, childhood archaeologists have pointed to the inherent adultism of their field and tried to explain the absence of the toy in their studies as a lack of interest in the child's perspective (Crawford 2009; Crawford, Hadley, and Shepherd 2018). But why should everything that ends up in a child's hand automatically be considered a toy? A tool in a child's hand becomes a toy from an adult perspective, but is this also the case from the perspective of the

child? Can the tool not remain just a tool? We will come across all kinds of examples, ranging from kitchen knives to compact cameras, that are means at hand that children use in play as tools (rather than as toys).[4] So, what is the "toyness" of an object precisely? What is a toy? For Benjamin, the toy is a "site of conflict," as it expresses the chasm between childhood and adulthood. In one of his book reviews, entitled "Toys and Play" (1928), he writes: "Even where they are not simply imitations of the tools of adults, toys are a site of conflict, less of the child with the adult than of the adult with the child" (2005b, 118). While adults impose toys on children, children do not need those toys-as-toys to play. For, as Benjamin adds, many toys "became toys only afterward, partly through the child's powers of imagination" (2005b, 118).

If the "invention of childhood" has been fundamental for a more child-tailored form of education, it has also led to controversies and somehow reinforced the adult–child hierarchy.[5] The question is: How do we avoid such a hierarchy and the lens of adultism that childhood archaeologists detect in their field? In general, from an adult perspective, a child's activity is considered as "playing" (instead of working), but this distinction is not always so clear to them. Children at play often combine both dimensions, blurring the distinction between play and work. For instance, the pretend play of making a YouTube vlog is not just a play but also serious work. Again, we concur with Benjamin who, already in the 1930s, complicated the clearcut opposition between play and work with his notion of *Spiel-Raum*, revealing "his at once critical and utopian theory of technology" (Hansen 2004, 8).

4 We are somehow reversing Vilém Flusser's observation about professional adult photographers, for whom the "camera is not a tool but a plaything" (Flusser 2000, 27). For children, the plaything becomes a tool, that is, a real camera.

5 See, for instance, Heywood (2020) on the controversial reception of Philippe Ariès's 1960 book, *L'enfant et la vie familiale sous l'ancien régime* (translated in 1962 as *Centuries of Childhood: A Social History of Family Life*).

Apart from the conceptual implications of play as activity, which we explore most extensively in Episodes 4 and 5, Benjamin also became our guide, so to speak, through the world of children thanks to his reflections on his own childhood in Berlin, discussed in Episode 1. Moreover, Benjamin's way of writing, of collecting "thought-images" (*Denkbilder*), of offering a kaleidoscopic view on modern life, has been in many ways inspirational for media archaeology.[6] Appropriate for our book is that Benjamin's *Denkbilder* have also been compared, to some extent, to "snapshots":

> Composed of a plethora of carefully gathered, juxtaposed particulars, the *Denkbilder* are not so much single "snapshots" as kaleidoscopic representations, miniature mosaics, or, in the new language of the "Arcades" production cycle, cinematic "montages." (Gilloch 2002, 93)

The kaleidoscopic view can indeed be understood as a method of sorts, consisting in studying your object from different perspectives, but it is also an invitation to look at ordinary practices in a new way, as when turning the cylindric toy and letting the shards of colored glass form new arrangements. In the end, we also like to imagine that, as a child, as little Walter, Benjamin played with such and other optical toys.

Film History without Directors and Films

Unlike little Walter, the protagonists of our book remain anonymous. Over the course of the episodes, they will be introduced as important yet nameless agents. The reason behind this anonymity is double. First of all, we want to protect the privacy of the children, as we are dealing with the media use by very young ones, from one-and-a-half years old. Even if most of them have

6 Among the main sources of inspiration for the field of media archaeology, Jussi Parikka mentions Benjamin's "early excavations into the rubbles of modernity" (Parikka 2012, 5).

now reached their teens or are even young adults, we are looking at their media (inter)actions chiefly as toddlers and preschoolers, which we try to capture within the fragility of private domestic contexts. As we will further elucidate in Episode 3, most of our research material comes from Western middle-class families. While we sometimes provide geographical indications, all the child's talking and singing has been translated by us into English for the reader's comprehension. By not mentioning the children's names, we also want to inscribe our little snapshot history into a larger "history of cinema without names"—an ambitious and unfinished project launched by Leonardo Quaresima in the mid-2010s as a reflection on film historiography (Cavallotti et al. 2016). Since the early years of the 21st century, children are becoming media users and producers at a very young age, that is, before they start learning about media in the more traditional way of (passive) knowledge transfer. And that is how, we would like to argue, our nameless protagonists, aged one to ten, are actively making media history and contributing to a "history of cinema without names."

More concretely, our argument is that children are contributing to the history of cinema by reinventing cinema. But this does not mean they are making great films or that they have promising careers as film directors. Indeed, we would not even claim that they are making films. If the term "toy" is ambivalent, so is the notion of "film," a term reserved for finished oeuvres with a title and an author. But why should we think of filming as a goal-oriented activity with a clear outcome? And do the notions of "film" and "video" each refer to different types of outcomes? In our research, we noticed that most children use "to film" as a verb, while the term "video" is used to talk about the outcome of a finished activity, but then it also depends on the child's mother tongue and linguistic variations occur. At the same time, the "footage" we study—to introduce yet another notion—is *found footage* of sorts. Not because it is experimental but because it is literally found, often by accident by the parents, on the devices

their children used, with or without permission. The footage could also be described as raw material, or raw footage, akin to professional raw footage that encompasses all filmed material, including what will be sorted out and turned into outtakes, or "NV" (*nicht verwendet*), as it is called in German, meaning "not used." The material children produce is ephemeral and fleeting, not least because—as we discuss in Episode 5—it is often "orphaned" right after it has been filmed. As such the footage resonates with the notion of "orphan film" coined by the Orphan Film Symposium, which had its first edition in 1999 under the title "Saving 'Orphan Films' in the Digital Age." Their working definition of an "orphan film" reads as follows: "Narrowly defined, it's a motion picture abandoned by its owner or caretaker. More generally, the term refers to all manner of films outside of the commercial mainstream" (*Orphan Film Symposium*, n.d.). Then follows a long enumeration of different types of orphan films that does not include children's films.

Not only do the children "orphan" their own films; the parents too often delete this type of found footage as it occupies too much storage on their devices and does not seem of any specific interest. The footage is indeed often abundant, repetitive, "badly" made. But there precisely lies its beauty, as we will argue in our book. We would like to invite readers to open their eyes, to consider this material for its inherent qualities, and to look out for other material made by other children.

Five Episodes

We call the chapters of this book "episodes," as the project is recounted as a serial narration, where each episode has an independent theme but also alludes to subsequent chapters or episodes, providing a sense of continuity. The threads that extend across the book create a network of thematic intersections that will hopefully inspire other researchers to engage with similar topics. By naming the individual chapters "episodes,"

akin to serial installments like TV series and podcasts, we are also thinking of the structuring of events in fairytale narratives. Indeed, in the first episode, entitled "Once upon a Time…," we introduce the children of our research project as fairytale characters, taking inspiration from Michel Serres's philosophical essay, *Petite Poucette* (2012a; translated in 2015 as *Thumbelina: The Culture and Technology of Millennials*), as well as from the classic fairytales *Tommelise* (1835; translated in 1846 as *Thumbelina*) by Hans Christian Andersen and *Le Petit Poucet* (1697; first published in English as *Little Poucet* in 1729, then as *Little Thumb* in 1764, and finally as *Hop o' My Thumb* in 1804) by Charles Perrault. The fairytale narrative brings us to the world of insects, to which young children are attracted in terms of scale and size. We look into various historical and contemporary examples of insect fascination, through the practices of collection, "forbidden games," and filming, and connect it to the physical smallness of our protagonists. Taking our cue from Serres's essay, we propose the term *film-poucette* (or, in English, little thumb film) to indicate the new type of video made by young children, and suggest considering the child's body as a fundamental part of a newly reinvented cinematic apparatus.

In the second episode, "Children Imagined Futures," we focus on the phone as recurrent element in the child's play, which often takes the shape of bricolage—both in the mythopoetical sense of Claude Lévi-Strauss (1966) and as musical staging principle, following Jane Feuer's reading (1980, 1993). We propose thinking of young children as media archaeologists, as they imagine possible futures in their play, by engaging with media and cinema's different temporal and historical layers (past, present, and future). We also think of children's playful media practices in terms of hacking, since they are not only making new devices but also repurposing old ones. Our reading of children as media archaeologists can be considered as a form of (conceptual) hacking, that is, the hacking of media archaeology itself.

In the third episode, "Through Artifacts and Anecdotes," which is focused on children's reinvention of the media screen, we propose another twist to media archaeology, underscoring our position as scholars who are also mothers and whose knowledge is therefore fully "situated," according to Donna Haraway (1988). From this feminist perspective, we look into two types of data that constitute our empirical material: artifacts and anecdotes. Often intertwined, both concepts are used as methodological tools for contextualization and "situatedness." From the field of childhood archaeology, as already mentioned, we pick up the issue of the absent toy as a challenge to rethink the meaning (and uncertain archaeological future) of DIY toys, that is, artifacts made by young children in the early 21st century. As far as the anecdote is concerned, we concur with Sean Cubitt (2013, 5) in making a claim for "the anecdote as a viable and indeed vital form of evidence." Furthermore, we follow Cubitt's proposition to think of the anecdote as a laboratory—a laboratory for theory making, where the claims of others are countered or disputed and where (unsuspected) connections are made.

The fourth episode, "Drawing with a Camera," introduces the notion of the "camera-crayon" to connect the child's practice of making (selfie) videos—by means of compact cameras, toy cameras, and phones—with the act of drawing. For this reason, this episode looks into the tradition of children's drawings by revisiting the writings of two nineteenth-century aestheticians: Swiss cartoonist Rodolphe Töpffer's *Réflexions et menus propos d'un peintre genevois* (Reflections and small talk of a Geneva painter, 1858) and Italian art historian Corrado Ricci's *L'Arte dei bambini* (Children's art, 1887). Töpffer and Ricci were among the very first thinkers who took children's drawings seriously and, more importantly, studied these drawings for their inherent qualities and not as immature forms of adult practices. This is exactly what we propose doing with children's (selfie) videos, that is, to read them from the logic of the child. Our analysis focuses on body movements as forms of "self-inscription," inspired by

James Lastra's analysis of nineteenth-century sound recording systems (2000). Here we also discuss how children produce *vocal* self-inscriptions when filming, making not only selfies but also "singies," as we call their singing videos.

In the fifth and last episode, titled "And Making (Home) Movies," we revisit the notion of home movies by placing the little thumb films within the "home mode of visual communication" (Chalfen 1976), where they can be considered—to again use Chalfen's words—as "snapshot versions of life" (1987). We engage with both continuities and discontinuities between the little thumb films by young children and the home movies traditionally made by fathers. We look at videos filmed by daughters but also those which are the result of a collective practice, either by a pair of siblings or a group of friends. Of key interest here is the complex process of negotiation of what it means to make not only movies but also remakes, and to play cinema.

E P I S O D E O N E

On an early summer day, a five-year-old girl uses a small digital photo-camera to film a butterfly. The flying insect is trapped inside the house, against the glass plane of a window. By means of the camera, the girl observes its fluttering movements, curiously and with patience, first at a certain distance and then moving closer to the window. The girl's presence is palpable through the handheld, although not too shaky recording device. Initially, the filming appears a mere prolongation of the girl's gaze, but then she makes a remarkable camera movement to better frame her object. After following the butterfly up and down by slightly tilting the camera, she rotates the device 45 degrees to the left as if she were shifting to a vertical framing. By doing so, she turns the vertically oriented wooden window frame into a horizontal one, with the butterfly captured right in the middle for a second or two, until it flies away off-screen. Length: 34".

[Source: Private archive, 2013]

Once upon a Time...

Surrounded by a world of giants, children use play to create a world appropriate to their size.
Walter Benjamin ("Old Toys," 1928)

There Was a Girl Named Thumbelina

In 2012, Michel Serres published a thought-provoking little book entitled *Petite Poucette*, which inspired us on multiple levels. It motivated the fairytale framing of our own book and the idea of introducing our protagonists as pseudofictional characters. It also prompted the coining of the French term *film-poucette* (in English, little thumb film),[1] that we are proposing to designate the short digital films or videos made by young children at the beginning of the 21st century. And, above all, it encouraged us to counter the many doomsday scenarios about technology that were surfacing in society at large during those years. Indeed, Serres's essay appeared in times of great skepticism about the

1 The French term was first suggested by Alexandra Schneider in a conference paper entitled "Au delà du dispositif le cinéma (re)trouve son enfance: A propos des films-tablets et films-mobiles d'enfants," at the international conference *Images, Histoire, Langage: Carte blanche à Jacques Aumont, Michel Marie et Roger Odin*, Paris, November 20–21, 2014. The concept was further developed and translated into English in Schneider and Strauven (2017).

impact of technology on the youngest generation, especially in relation to new media devices, such as mobile phones and electronic tablets. Serres's essay was refreshing because of its (seemingly naïve) optimism.

Whereas most pedagogues warned of the dangers of excessive media use and screen time, Serres showed profound sympathy and admiration for the generation of his grandchildren, as he witnessed how the rapid media transformation changed the way they accessed the world and acquired knowledge. As such, his essay offered arguments that could intervene in the ongoing media literacy debate by overtaking the typical bad vs. good argumentation.[2] As is well known, anxieties, fears, and even phobias about new technologies constitute a recurring theme or topos in pedagogical discourses.[3] First, books were considered dangerous for children's souls, then, movies were seen as a school for criminals or a "crime workshop"—a claim supported by the Payne Fund Studies in the early 1930s (Bosséno 1993). This negative perception of technical media later shifted to television and videogames; and in the 2010s handheld media devices started to provoke fear among parents, educators, and politicians.[4] Such a media-risk approach is grounded in a simplistic stimulus–response model and has proved to be rather polarizing and unilateral, not taking into account how those "bad" media can, for instance, stimulate the child's imagination or help develop certain technical or motoric skills.[5] As researched by

2 Critical discussions of the media literacy debate can be found, for instance, in Buckingham (2003) and Hediger (2011).

3 On the topos as a media-archaeological concept, see Huhtamo (1996).

4 This is an ongoing debate. In recent years, TikTok has been discussed as highly problematic. Some consider the app directly harmful, especially for children. See, for instance, Amnesty International's report, "Driven into the Dark: How TikTok Encourages Self-Harm and Suicidal Ideation" (2023).

5 Pioneering in this respect was the research conducted at the so-called Babylab of the Centre for Brain and Cognitive Development at Birkbeck, University of London. Run by developmental and cognitive scientist Annette Karmiloff-Smith, the Babylab team made the headlines in 2015 because they recommended giving babies iPads instead of books (Slawson 2015).

Jutta Wiesemann and her colleagues at the University of Siegen, handheld media are nowadays present in most families and as such have become an integral part of what they call a "digital childhood" (Wiesemann et al. 2020).

We position our research within a genealogy of studies that focus on children's play as a way of world-making and on children's art, in particular the rich tradition of studies on children's drawings, which we will discuss in Episode 4. As argued by educationalist Jürgen Oelkers (2010), it was the growing interest in children's creativity—as practiced in drawings—that paved the way for the so-called progressive education movement. We contend that, if the media literacy debate wants to evolve into a more productive undertaking, it may need to pay more attention to children's creative interaction with audiovisual media. For the study of children's spontaneously made films, it is useful to investigate the history of studies of children's art, especially for understanding how these studies emancipated and started to focus on the inherent qualities of the child's artistic practice. This is not to advocate for unrestricted access to portable media devices for small children, but a plea to rethink normative film and media literacy positions. For such an approach, we believe Serres's intervention offers a good starting point.

According to Serres, the youth of today no longer lives "with" the computer but "in" the computer.[6] They live and think differently from the previous generations, because they write differently; that is, they write very rapidly, with two thumbs:

> He or she writes differently. After watching them, with admiration, send an SMS more quickly than I could ever do with my clumsy fingers, I have named them, with as much tenderness as a grandfather can express, Thumbelina (*Petite Poucette*) and Tom Thumb (*Petit Poucet*). (Serres 2015, 7)

6 This is how Serres (2012b) summarizes it in an interview with *Le JDD*, narrating an anecdote about his grandson.

34 In French, the characters named "Petite Poucette" and "Petit Poucet" may seem to form a pair of siblings, such as a sister and a brother, but in fact they belong to two different classical fairy-tales. Petite Poucette is the French name for Tommelise, the main character of the homonymous fairytale by Danish author Hans Christian Andersen (first published in 1835), known in English as Thumbelina. Petit Poucet, on the other hand, is the hero of an old French fairytale, published in 1697 by Charles Perrault. His name is translated in English as Little Thumb, Little Thumbling, or Tom Thumb, which are all alternatives for the character's "official" name Hop o' My Thumb or Hop-o'-My-Thumb (Hop-on-My-Thumb). While the English translation of Serres's essay kept the reference to Andersen's tale in its title—*Thumbelina: The Culture and Technology of Millennials* (2015)—the German translation, which appeared in 2013, opted for a different title: *Erfindet euch neu! Eine Liebeserklärung an die vernetzte Generation* (Reinvent Yourself! An Ode to the Connected Generation). In order words, the German edition removed the name of the (female) protagonist from its title, bringing to the fore the notion of (internet) connectedness, to which we will briefly return below. But let us first introduce the fairytale characters.

Andersen's tale is about a little girl who grew out of a grain of barley that a childless woman got from an old witch. Thumbelina is no bigger than a thumb and sleeps in a walnut-shell cradle. One night she is kidnapped by a very ugly mother toad who wants her as a bride for her son. Thumbelina's life story evolves as a series of happenstances where she meets other small creatures: a butterfly, a cockchafer, a mouse, a mole, and a swallow. There is no real suspense structure in the fairytale, which develops as a sequence of protonarratives (or "takes," so to speak). It is precisely this episodic storytelling that resonates not only in the structure of our book but also in the playful media practices of young children. In short, seriality without real progression is what underlies this adventure story, which goes from one chance encounter to the next: "And then… and then… and then…" Each

time, Thumbelina manages to escape from the hands of an unattractive suitor to meet the next, and so on, until, with the help of the swallow, she finds a fairy boy her own size.

Perrault's Petit Poucet is the youngest and smallest of seven brothers who live in great poverty. When abandoned by their parents in the woods, the boys find their way back home thanks to the little pebbles dropped along the way by Hop-o'-My-Thumb. The second time they are sent into the woods, they are less successful, because, lacking pebbles, Hop-o'-My-Thumb uses breadcrumbs, which are picked up by the birds. And so the boys end up in the house of an ogre. But the clever Hop-o'-My-Thumb saves his brothers again with a series of ruses. While the ogre is asleep, the little boy removes the giant's seven-league boots and puts them on his own little feet; magically, they fit him very well and allow him to run much faster. The motif of the seven-league boots can be connected to the common practice of young children trying out their parents' huge footwear, from leather boots to high heels. More relevant for our argument, however, is the connection with the theoretical notion of the "fit," as discussed by Heidi Rae Cooley in relation to early "mobile screenic devices" (MSDs) that predated the smartphone (such as flip phones and palm computing devices). Borrowed from biomechanics and industrial design, the term indicates a form of bonding that emerges unintentionally, or even unwillingly, between the hand and the handheld media device. Cooley writes:

> The *fit* of a hand and a MSD transpires immediately and without volition, for the hand to purposely engage the MSD (or vice versa) presupposes a unidirectional, calculative relationship, not one of interconnectivity and bonding, acquaintance. In fact, it is the very involuntariness, if you will, of *fit* that enables such a dynamic happening between hand and MSD. (2004, 139)

Just as the seven-league boots perfectly fit Petit Poucet's little feet, there seems to be an "interpenetration"—to use another

term proposed by Cooley (2004, 147)—between the child's small hands and the compactness of today's media devices. This was particularly true with flip phones and other early models of cell phones, as well as the first generation of Apple's "smartphones," the iPhone 1 to the iPhone 4, which only came in the small compact size (11.5 x 6 cm).

The "Smart" Phone

From a media historical point of view, it is important to note that the term "smartphone" was already introduced in the late 1990s, but it was only popularized after the success of the iPhone that was launched in 2007 and its second generation that was marketed with 3G in 2008.[7] We prefer to use the more generic terms, such as "mobile phone" or "cell phone," as our research concerns a period when the term "smartphone" was not so commonly employed by users (and this is maybe still not the case). Episode 2 will pick up this terminological issue concerning the smartphone, starting with the homonyms "iPhone"/"I phone"—the name of the Apple device, which refers also to the verb or activity of making phone calls. At the beginning of the 21st century, children would call Apple's new portable device a "phone" (or even "iPhone"), but this term was not necessarily associated with the function of making phone calls, as children quickly understood the multifunctionality or all-encompassing dimension of the smartphone—following the path of Serres's protagonists.

On the other hand, we should not dismiss the generational differences between Serres's Petite Poucette and Petit Poucet, who are Millennials born between the early 1980s and the late 1990s, and the children of our research project, who are Post-Millennials born between the late 1990s and the early 2010s.

7 For a media-archaeological discussion of the term "smartphone," which was allegedly coined by Ericsson in 1997, see Strauven (2024).

Certain media transformations experienced by Petite Poucette are still ongoing today, if not in a more intensified and/or accelerated manner, as the youngest generation is growing up with media devices all around them and an always "smarter" phone as their life companion. A crucial difference, however, is that Serres's Petite Poucette was using the phone to text and search online, inscribing herself in the history of telecommunication and internet studies by being "connected" (as implied by the title of the German translation of Serres's essay [2013a]). Our Petite Poucette, on the other hand, is using the phone mainly as a camera to take pictures and make little videos. In other words, rather than contributing to a new future of information technology, she is using the phone to reinvent cinema.

But why did Serres name his protagonist "Petite Poucette" instead of "Petit Poucet"? If Serres does not offer an explicit answer to this question in his little book (in which Andersen's and Perrault's fairytales are never explicitly mentioned), he is very clear about this choice in a video interview organized by Sauramps Librairies in March 2013. The reason is simple: "For forty years," said the French philosopher, "I have witnessed the victory of women" (Serres 2013b; our translation). We also noticed a high degree of media creativity among little girls, which does not mean there are no boys who are creatively engaging with media or that we excluded them from our research. Yet, like Serres, we want to turn the girls into the protagonists of the 21st century; we want to inscribe them already today in the history of the future, saving them prematurely from oblivion or "marginalization," a fate that befell so many women filmmakers in the past. In fact, we like to think of Serres's *Petite Poucette* as the female version of Perrault's tale, recalling the rhyming moral at the end:

> At many children parents don't repine,
> If they are handsome; in their judgment shine;
> Polite in carriage are, in body strong,
> Graceful in mien, and elegant in tongue.
> But if perchance an offspring prove but weak,

Him they revile, laugh at, defraud and cheat.
Such is the wretched world's curs'd way; and yet
Sometimes this urchin whom despis'd we see,
Through unforeseen events doth honour get,
And fortune bring to all his family. (Perrault 1922, 125)

Expanding on the topic of hidden skills and the sudden benefits that might accrue from the youngest, shortest, and most unnoticed, we can apply this moral to girls also. The future lies, quite literally, in the hands of these little creatures, these "urchins." For they must, as Serres observes, reinvent how to live and how to learn, how to be in the world and how to shape the media to their liking (2015, 15).

Miniaturization and Insect Fascination

If Serres uses the names of Petite Poucette and Petit Poucet in reference to their thumbs and the practice of thumbing on the keyboard of mobile phones, he is less concerned with, or inspired by, the smallness of the fairytale characters. Yet this is precisely our interest, as it relates to both size and scale. Our protagonists are small human beings, who are growing up "surrounded by a world of giants," as Walter Benjamin phrased it in 1928 in an essay titled "Old Toys" (Benjamin 2005a, 100). While reviewing an exhibition of playthings that was on display at the Märkisches Museum in Berlin, the German philosopher noted a correlation between the growing interest of adults in children's toys, games, and books, and the desire to make life lighter, to overcome the unbearable weight of life, to liberate oneself from the cruelty of the real world. In Benjamin's words, the adult "removes [the] sting [of the real world] by playing with its image in reduced form." Children, on the other hand, find innumerable ways "to create a world appropriate to their size" (Benjamin 2005a, 100).

At the beginning of the 21st century, this is still the case: children *adjust* the world to their dimensions. In their play, the world is not simply reduced (or perceived in a "reduced form") but becomes

a child-sized universe. The smallness of their bodies is a matter of scale: they appear small not only because of the height of adults and older children, but also because of the hugeness of their surroundings (like the furniture in the house) and the wideness of the world outside.[8] Yet they adapt this world to their size, going on adventures, exploring everything around them, with or without mobile media device, from a low horizon in search of other small creatures, like insects. Young children seem to be attracted by the smallness of insects; for in the insect world, the child is the giant, or Gulliver among the Lilliputians.[9]

Benjamin himself, as revealed in his Berlin childhood memories, was fascinated by butterflies; during the summer holidays, he enjoyed chasing after them with his butterfly net. The child's sense of adventure is nicely captured in Benjamin's description of these escapades that "lured [him] away from well-kept garden paths into a wilderness, where [he] stood powerless before the conspiring elements—wind and scents, foliage and sun—that were bound to govern the flight of the butterflies" (2006a, 350). Although Benjamin's childhood memory is foremost about the hunting experience, as a mixed temporal experience of past, present, and future and as an exchange of roles (Walter becoming the butterfly being captured), it should not be overlooked that there was a butterfly collection at the basis of this hunting—a collection that was contained in a "spacious cabinet on the wall of [his] boyhood room," displaying species such as "cabbage butterflies with ruffled edging" and "brimstone butterflies with superbright wings" (Benjamin 2006a, 350).

8 From the perspective of accessibility research, the child would correspond to the notion of "nonstandard user" precisely because of their physical smallness. On the use of nonstandard user models, see, for instance, Rosmaita et al. (2006).

9 On this effect of Gulliverisation in relation to our screen culture, see Huhtamo (1990), Beugnet and Van den Oever (2016), and Beugnet (2022). On the figures of the "miniature" and the "gigantic," see also Stewart (1993).

40 Another great insect collector was the young Satoshi Tajiri, Japanese video game designer best known as the creator of Pokémon. Called Dr. Bug by his classmates, Tajiri aspired to become an entomologist. In the late 1960s and early 1970s, in the then still rural suburbs of Tokyo, he collected mainly beetles—an activity that directly inspired the Pokémon trading cards (as substitutes for insects). The case of Tajiri is mentioned by entomologists Oliver Cheesman and Roger Key (2007, 329) in their study about the importance of harmless collecting to assure continuity of entomological knowledge.

Since the 1990s, insect conservation and biodiversity have been growing concerns within the field of entomology (Stewart, New, and Lewis 2007; New 2012; Shah and Sharif 2018). The emerging discipline of insect conservation, which is directly connected to biodiversity issues and climate change, proposes to investigate insects as biomonitors of environmental conditions and as agents in the restoration of ecosystems. As biologist Michael Samways puts it in "Insect Conservation for the Twentieth-First Century" (2018), insects should be conserved not only for their own sake (as scientifically complex forms of life), but also for the sake of humans, whose health and happiness largely depends on biodiversity. In this context, taxonomy is crucial. According to Cheesman and Key (2007), data collection by amateurs, like Tajiri, is a possible way to counter the recent declining trend in professional taxonomy. They argue that the extinction of experience as collector and/or taxonomist might reinforce the extinction of the species.

In *Insect Media: An Archaeology of Animals and Technology* (2010), Jussi Parikka proposes a new approach to media theory from the perspective of insects, taking his cue from the nineteenth-century fascination for entomology both as a study of social organization and as an exemplary mode of classification. In this respect, Parikka observes how Lewis Carroll's novel *Alice's Adventures in Wonderland* (1865) is symptomatic of the Victorian enthusiasm for exploration and taxonomy, allowing the reader

to experience, together with Alice, "new landscapes and exotic species as an armchair explorer of worlds not merely extensive but also opened up by an intensive gaze into alien microcosmoses" (Parikka 2010, 7). Carroll's title character, arguably based on the ten-year-old Alice Liddell, is about seven years old when she falls through a rabbit hole into Wonderland, where she constantly changes size due to what she eats and drinks. Alice meets many strange characters, not only monstrous human beings, but also anthropomorphic animals, among them the hookah-smoking Blue Caterpillar. Parikka briefly mentions the encounter with the Blue Caterpillar, pointing out how Alice's confusion about continuously shifting scale in one and the same day is "something incomprehensible to the caterpillar . . . whose mode of being is defined by the metamorphosis and the various perception-/action-modulations it brings about" (2010, 8).

Forbidden Games

If we consider here both Tajiri's and Benjamin's bug collections, it is not only to point out the timelessness of such a childhood pastime, but also, in light of recent studies on insect conservation, to counterbalance certain (conventional) readings of children's cruel attitude towards these little creatures. Collecting bugs often means hurting or even killing them. As a case in point, we would like to recall here the "forbidden games" initiated by the two protagonists of René Clément's classic film *Jeux interdits* (*Forbidden Games*, 1952). Taking place during the war, the film depicts the "playful" actions of the ten-year-old Michel and the five-year-old Paulette. Their game consists of making graves and stealing crosses for their secretly built animal cemetery, where they first bury Paulette's little dog that had died, together with her parents, during a German air attack. Soon the challenge becomes to collect as many dead animals and insects as possible, and occasionally, in lack thereof, even to kill one. At some point, Michel pierces a cockroach with a pen, simulating a bombing—a good example of creating a world to his own size.

42 We came across similar forbidden games executed by today's children. For instance, in the summer of 2017, three girls—between the ages of seven and nine—constructed an insect hospital. It all began with the discovery of a wounded great capricorn beetle (or *cerambyx cerdo*) in the Italian countryside, where the species is vulnerable according to the classification of the IUNC (International Union for the Conservation of Nature). Impressed by its very long threadlike antennae, the girls studied the little creature for a while and discovered it was injured, which probably happened during an intraspecific fight with another male for possession of a female. The girls decided to build a little house to care for the mutilated beetle: a cardboard box was found and filled with leaves, stones, and twigs. Then, the idea grew to turn the box into a hospital: compartments were created with cardboard dividers, another box was added, and so forth. Meanwhile, the girls also went in search of more injured insects to populate the hospital. And when not enough patients were found, they did not shy away from intervening with their own hands by bending a leg or a wing of some of the captured invertebrates.

Five years earlier, in the summer of 2012, another group of three children—a girl (aged five) and two boys (aged seven and eight)—made an insect zoo on the terrace of a holiday home in Switzerland. After having caught several animal species in different containers, they put them on the tiled floor of the terrace and started filming. In fact, it is Petite Poucette who films the two boys, while they try to bring the little creatures into action. At the beginning, we briefly catch a glimpse of the girl's hand, with a different color of nail polish on each nail, leaning on the ground. We never get a full shot of the animating boys, but only see parts of their bodies and mainly their hands operating the miniature zoo. First, they lift a white platter that covers a green plastic colander, holding a seemingly frightened little lizard; it is "all tangled up," as one of the boys observes off-screen. But when giant hands appear above the little creature, it starts moving ("very cool!") and climbs up towards the edge, so that the colander is

quickly covered again. Next to it stands a large white bowl filled with water. Following the pointing finger of one of the boys, the camera gets closer to an aquatic insect that is contained, motionless, in the bowl. Since blowing on the water surface has no effect, a hand enters the water to give the water bug a little push. It starts swimming, gets onto a long narrow leaf at the bottom of the bowl and surfs up. Once it hits the surface, it turns around and swims upside down: it must be a water boatman, or so-called backswimmer. Then the demonstration moves on to a glass bowl with a pierced lid. Inside is a harvest spider whose long legs are visibly moving. This is indeed the comment by the filming girl offscreen: "It moves." One of the boys says: "We are making a very long film!" Then follows a glimpse inside another uncovered glass bowl, filled with earth and some leaves, revealing crawling ants. And, finally, an empty Coca-Cola bottle with a couple of grasshoppers is held up in the air. The camera films through the plastic texture of the bottle and records the noise made by the legs of the grasshoppers, jumping and trying to get out. The filming stops abruptly. Total length: 2'22".

In this little zoological film, there is a lot at stake: it is not only about the child–insect relation, the microscopic exploration, and the manual (or "hands-on") operation, but there are also more general issues, such as movement, vertical framing, seriality, length, and (failed) adult intervention. In fact, at the beginning of the film, we hear in the background the voice of a mother saying that they should not make a movie, but only take photos—an instruction that the children clearly ignore as they continue with their "forbidden game." The abruptness of the ending, however, might have to do with the lack of storage on the first-generation iPhone that was used to shoot the film.

It is interesting to compare this short phone film with another more ambitious video project, undertaken about ten years earlier, by three sisters in northern Italy at their grandmother's country house. In the summer of 2003, they filmed the first and only episode, titled "Episode," of their garden documentary. They

used a sheet of paper as a title card on which they also wrote their secret agency acronym, composed of the three initials of their first names: "A.G.E." The oldest sister, aged twelve, is operating the camera, which in this case is the mother's camcorder, a Panasonic VX47. Partly overwritten by new material, the surviving footage runs for about 30 minutes.[10] For their project, the three sisters emulated the format of the episodic TV documentary, a genre that their father loved to watch. The second sister, aged nine, is acting as the TV host. Halfway through, they also inserted a commercial break by filming a flyer they found in the garden. Their project took the shape of several takes in succession, according to the principle of in-camera editing, that is, editing without postproduction. This was a very common practice for electronic video recording on tape, while digital videography stores each take as a separate file, creating each time a new film, so to speak.

Despite the differences in recording device, mediascape, and format, this video project shares some similarities with the insect zoo film. First, the making of the documentary is clearly a form of play; it is a pastime during the summer holidays. The play consists of a performance, a form of pretend game, with the three sisters acting as TV producer, TV host, and extra, respectively.[11] Second, the filming becomes a tool of their "'imagination'

10 The footage was made available to us by one of the sisters, Giada Bigot, a student at the University of Udine. With a smartphone, she filmed the video recordings as displayed on a TV screen. She also used the footage as material for her Media Archaeology paper, "Playing the Media," University of Udine, May 2018.

11 Dutch historian Johan Huizinga discussed the pretend play as a form of performance in his groundbreaking study *Homo Ludens: Proeve eener bepaling van het spel-element der cultuur* (1938; translated in 1949 as *Homo Ludens: A Study of the Play-Element in Culture*). He describes it as "a stepping out of 'real' life" without, however, losing awareness of reality: "The child is *making an image* of something different, something more beautiful, or more sublime, or more dangerous than what he usually is. One is a Prince, or one is Daddy or a wicked witch or a tiger. The child is quite literally 'beside himself' with delight, transported beyond himself to such an extent that he almost

in the original sense of the word" (Huizinga 2006, 108) to transform ordinary life into something extraordinary. Whereas in the previous case the children put the insects to hand to make a miniature zoo, here the garden is turned into a jungle where cats become pumas. In other words, the three sisters do not simply make a documentary of their grandmother's garden but reveal its (imagined) dimensions as wilderness. As the TV host proudly announces: "Today, in our transmission, we'll get to know the jungle, also known as Grandma's Garden." Third, besides cats and birds, insects also attract the attention of the three sisters. More particularly, they make a recording of a black beetle, which they claim is a "very rare specimen." The beetle is filmed from above while it slowly moves across the ground.

Here, unlike in the forbidden games of the insect cemetery, hospital, and zoo, no animals are captured. The motif of the garden/jungle documentary is that of a journey. Quite often the zoom is used to get closer to the objects that are being filmed. The oldest sister, who operates the camera, reflects aloud on its effects. While zooming out of a close shot of a cat, she comments: "We go away and return to where we are now: this is the real distance." She makes the (imagined) TV viewer believe that she was first close to the cat and then far away, as though she is walking into the forest, without actually moving around; thus, she considers the zoom "not only as an extension and enhancement of the human eye, but almost as a substitute for the movement of the body."[12] While the girl frequently zooms in and out, she takes no close-ups with the camera at close distance, except for the title

believes he actually is such and such a thing, without, however, wholly losing consciousness of 'ordinary reality'. His representation is not so much a sham-reality as a realization in appearance: 'imagination' in the original sense of the word" (Huizinga 2006, 103 and 108).

12 We are quoting here from Bigot's unpublished final essay (see footnote 10 in this episode). Bigot also comments on footage that was shot a couple of years later, following the same format. Here the oldest sister explores the experimental dimension of the zoom by excessively zooming in on the ear of a cat until the image blurs and becomes completely grey.

card and the flyer-commercial. Compared to the insect zoo that was shot with a smartphone, the footage of the garden/jungle documentary is less myopic, and its film style remains rather observational. Nevertheless, the act of filming involves a transformation of the world, of an ordinary reality into an "exotic" wilderness, enhanced not only by the use of the zoom but also by the narration in voice over.

Whereas the twelve-year-old girl relies on the zoom function of the camcorder to get closer to her objects for the TV documentary, younger children operating mobile phones or compact cameras usually just move their own bodies closer to the objects. This approach was tried out, quite intuitively, by a four-year-old girl in the summer of 2012. From the top of a chair, she filmed a tiny grasshopper that had fallen into the kitchen sink. Although the insect's feelers are barely perceptible against the silver backdrop of the kitchen sink, the little girl manages to bring them into view towards the end of her short video by leaning deeper into the sink, thus revealing that the insect in question is probably not a grasshopper, but a bush cricket, given the considerable length of its filamentous antennae.

A final example that we want to include in this genealogy of insect footage is an exception to the rule, since it is not about real-life insects but instead about cartoon figures. A five-year-old child took an interest in making videos with a compact camera while watching TV. As a result, her videos consisted of short extracts of TV programs for children. Among these videos, there is a 25-second recording from *Maya the Bee*, which starts with a digital zoom through a flower meadow. The zoom brings the TV viewer closer to Maya and Flip, the grasshopper, that gets a dew drop on its hat. Then follows a shot with two other bees flying away. At the beginning of the extract, the camera operated by the little girl is slightly slanted (as in a Dutch angle), but most of the time she keeps the framing straight, capturing not only the TV screen but also part of the equipment underneath it. Since the girl is looking

at the TV screen through the LCD screen of the recording device, it is a rather intricate encounter of screens.

Little Thumb Films or *Films-Poucettes*

Despite the often significant technical differences as well as the idiosyncratic styles of filming, we propose placing all the short videos made by today's young children under the common denominator of the French term *film-poucette*, which translates in English as "little thumb film." The notion of the little thumb film is loosely connected to the flipbook, which in German is known as *Daumenkino* ("thumb cinema"), a paper booklet with a series of images that fits into the hand and is operated, put in motion, by the thumb. At the same time, the little thumb film is something distinctively different, as the adjective "little" emphasizes. Inspired by Serres's *Petite Poucette*, the notion aims to capture in the first place the small size of the filmmaker, who is very young and who in fact has become younger and younger. Whereas yesterday's first graders started filming at the age of four or five, the youngest generation makes their first little films already at the age of one and a half or even earlier. Furthermore, the term refers to the compactness not only of the various recording devices that literally fit into a child's hand but also of the films themselves, which consist, generally, of one single take. Filming with a compact camera or a cell phone corresponds to the default mode of digital videography discussed above, whereby each videographic pause produces a new file or "film." Most of the little thumb films are very short, sometimes no longer than a couple of seconds. But they might also run for two or three minutes, depending on the play or the available memory of the device.

In the first decades of the 21st century, children used a variety of media devices to shoot their little thumb films, ranging from camcorders and point-and-shoot cameras to mobile phones. The latter quickly gained terrain and became the default recording device. It is precisely in this transition period that Roger Odin

(2012, 2016) introduced the concept of "p film" or "p cinema," indicating the new "*communication space*" for film viewing defined by films shot on mobile phones, with the "p" referring to multiple related notions, such as phone, portable, and pocket. It could be argued that the little thumb film belongs to this new communication space, although we would like to draw attention to the playful practice of filming—that is, filming as a form of play—rather than to the act of communication (between the viewer and the film). The "p cinema," thus, also refers to play for us. As already mentioned, Serres considers the mobile phone as a device of spoken or written language, that is, a tool for communication and information, whereas we are mainly interested in its use as a tool for filming, operated by the little fingers of the little thumb filmmakers.

As Till A. Heilmann has argued, there is an intrinsic connection between the digital and the finger. He writes:

> What is "digital" about digital media? Every answer seems to point, like an index, at our fingers—the fingers that taught us to count and to devise of number as an abstract concept (cf. Dantzig 1940); the fingers that, since the beginning of graphism, have guided our instruments in writing and drawing (cf. Leroi-Gourhan 1964) and thus made possible mathematics (cf. Mersch 2005); the fingers that implemented mathematics in ever more technologically advanced machines and media, up to and including the computers of our day (cf. Kittler 1993); the fingers we use constantly to press the keys, buttons, and switches on almost any electric, electronic, or digital device from an alarm clock to an automated teller; the fingers that let us control the various interfaces of digital media, from the keyboard of our desktop computer to the touchscreen of our mobile phone. (Heilmann 2014, 42)

This is also true for our little thumb filmmakers: they are using their fingers to count, to paint, to put on (finger) puppet shows and, in addition to all this, to shoot little thumb films or

films-poucettes. While filming, children use their thumbs and index fingers interchangeably to push the icon buttons on the camera's embedded LCD screen or the phone's touchscreen.

Apart from the explorative use of these small screens, little thumb films are defined by a haptic style of filming, characterized by closeness, body movements, and traces of touching. Indeed, we distinguish at least three different meanings of the term "haptic" that we see combined in the child's practice of digital filmmaking. First, within the domain of film studies, it refers to the visual regime of closeness, or *Nahsicht*. The term comes from Alois Riegl's art theory, as revisited by Laura Marks (1998), suggesting a sensation of touch in low-res video images. "Haptic visuality," in Marks's reading, pertains to the viewing process, wherein "the eyes themselves function like organs of touch" (1998, 332). For our reading, haptic as a mode of closeness and fragmentation refers to the lack of distance between the child, the recording device, and the subject recorded, often resulting in blurred and/or shaky views. Due to this lack of distance, the vision can be said to be myopic. As in Riegl's haptic regime, it is difficult, if not impossible, to get an overall picture of the scene that the child is filming. Furthermore, because of the small body size of the filmmaker, the horizon is often low or simply missing. The camera's jerkiness is connected to the second meaning of haptic, which is informed by the child's body motion (or kinesthesia). Little thumb films are kinesthetic experiences that are not limited to sight or sound but involve actual touch and movement through space. Thirdly, they are also haptic because truly "hands-on," often revealing traces of fingers in front of the lens. While most of these traces are unintentional, some children touch the (phone) camera's lens very consciously and deliberately, for instance, by covering and uncovering it with their full hand (as if slapping it), achieving as such a truly tactile experience, that is, an experience of physical contact.

For instance, in the autumn of 2014, a five-year-old boy made a series of five little thumb films, all selfie videos, when he was

with his parents and some of their friends at a restaurant. He obviously got bored and started playing with his mother's iPhone. His boredom, we would like to argue, led to a creative interaction with media, an exploration of its potentialities.[13] The first three clips, which last only a couple of seconds, are made in the horizontal (or landscape) format. Very short and snappy, the boy says "Hello!" to the camera/screen/self-image. The last two clips are vertically framed and last a bit longer, allowing for a longer "conversation" and exploration with the screenic image. In one, the boy even turns around trying to capture his butt (or rather the painted logo on the back of his jeans); in the other, he twice covers the camera lens with his full flat hand, first slowly and then more briskly. After these "hands-on" instances, he also shakes the phone quite forcefully, which results in blurry striped images of the ceiling. A similar example of haptic filming is offered by a five-year-old girl who uses an obsolete compact camera without front-facing (or selfie) camera to make selfie videos. In one of her little thumb films shot in January 2014, she not only literally turns the camera around, so that the lens faces her face, but at two different moments, she also touches insistently and vigorously the camera lens with her hand.

The Child's Body as Part of the Cinema's Basic Apparatus

The two previous examples of literal hands-on filming, touching the camera lens with the palm of the hand, point to an important aspect of the child's playful practice: the body becomes an essential part of the basic cinematographic apparatus. In both cases, the hand functions as a lens cap or a mask, allowing the filmmaker to partially (or fully) cover the image plane within the

13 We could say that the opposite mechanism is at play when adults use their phones to endlessly scroll through social media, a gesture that leads to numbness and boredom. On the relation between boredom and the repeated gesture of "refreshing" social media feeds, see Alexander (2025).

frame, as a variation of the iris shot or other masking techniques. Here we propose revisiting Jean-Louis Baudry's notion of the basic apparatus, which refers to all the tools and techniques needed to produce and project a film, including thus the *dispositif* or viewing situation. In the apparatus theory, grounded in Baudry's early writings on the *dispositif*, the notion of the basic apparatus has remained underexplored as its physical, material traces are erased during the projection in the movie theater (reminiscent of Plato's cave) (Baudry 1974–75, 2009). Here we want to somehow subvert the classical screen theory by calling the attention back to the basic apparatus and by suggesting that it also includes the body of the (little) filmmaker.

In a footnote, Baudry defined the basic apparatus as follows:

> In a general way, we distinguish the *basic cinematographic apparatus* [*l'appareil de base*], which concerns the ensemble of the equipment and operations necessary to the production of a film and its projection, from the apparatus [*le dispositif*] . . . which solely concerns the projection and which includes the subjects to whom the projection is addressed. Thus *basic cinematographic apparatus* involves the film stock, the camera, developing, montage considered in its technical aspects, etc., as well as the apparatus [*dispositif*] of projection. The basic cinematographic apparatus is a long way from being the camera by itself, to which some have wanted to say I limit it (one wonders what bad arguments this can serve). (2009, 174)

As is well known, the original camera of the Lumière brothers, the so-called Lumière Cinématographe, combined many of these aspects into one device: the small box could record moving images, print the film strip, and project the developed film. One could argue that Baudry's notion of the basic apparatus wanted to include all the peripheral devices as well, ranging from lenses, dollies, set lights, and microphones to color filters, special effects, and speakers or sound enhanced screens. This would mean

that the basic apparatus is always expanding, and that today we should, for instance, include also the computer, digital networks, fiber optics, and DCPs (digital cinema packages, consisting of audio, image, and data files). The "etc." in Baudry's quote could indicate that the list is indeed endless.

On the other hand, we could also claim that the basic apparatus has again converged into one single machine: the smartphone. Unlike the Lumière Cinématographe, however, this "clever" device allows for the making and viewing of films to happen simultaneously, as our little filmmakers understand very well. Indeed, for today's young children, filming is a form of play. The play is a combined act of filming and watching, that is, of making a film and watching the very same film at the very same time on the screen display of the smartphone (or on the embedded LCD screen of the point-and-shoot camera). What is more, once the film has been recorded (and simultaneously viewed), the child generally loses interest in it.

In other words, the filming child is both filmmaker (belonging to the basic apparatus) and film spectator (belonging to the *dispositif*). More specifically, while operating the small recording device—be it a mobile phone, a tablet, or a compact camera—the child's body becomes part of the basic apparatus, either as a whole (the body as tripod) or as an individual element (the hand as a mask, an auxiliary, or a director's assistant, so to speak). Given the small size of the child's body, the device is not always held at the "right" distance, or at the distance a "standard user" would hold it. This enhances the hapticity of the little thumb films, and also the strong entanglement of the body with the basic apparatus.

For instance, in 2013, an eight-year-old boy used his mother's iPhone to film an ingenious construction that he had made with Kapla blocks. He wanted to document not only the construction but also the action of a toy train running through it. The little train is operated by the boy's right hand, while his left hand is holding

the recording device. However, during the filming process, the young filmmaker encounters a little problem that forces him to deviate from his imagined script. Suddenly, he needs both hands to fix the action, as the little train derails. The camera fails to keep the little train in view as he sets it back on the rails, instead recording the area around it, that is, the wooden floor on which the Kapla construction stands. The boy keeps on filming so that the film has a "proper" end, as supposedly planned, but the action in between is obfuscated. We hardly see anything apart from the nonaction. Yet it is precisely this little "accident" that makes the 43-second film interesting, because the concentration (and frustration) of the silent filmmaker can be physically felt. The accident becomes the new, unexpected attraction, requiring both hands as an integral part of the basic apparatus.

In 2012, a four-year-old girl encountered another unexpected technical problem while she was trying to record the movement of a harvestman between the slats of a wooden folding chair, outside on a balcony. From a high-angle perspective, the little girl slowly moved closer to the spider to get a better view. Although a bit wobbly, she manages to keep the framing fairly fixed, her body functioning as a tripod. Her gaze is calm and patient, but nothing really happens. At least so it seems. While filming and simultaneously looking at the embedded screen on the recording device, the child discovers the presence of a second harvestman on the chair and decides to follow its movement across one of the slats. Occasionally, she also captures her own feet standing next to the chair, as the extension of her body-tripod or, even more aptly, the tripod legs. In fact, the autofocus of the recording device fails to "see" the harvestmen, focusing instead on the wooden slats and the floor underneath. While her feet are sharply recorded, the minuscule bodies of the spiders are reduced to semitransparent dots that look more like accidental stains or the result of dust on the lens. Length: 2'47".

In Episode 4 we will discuss some examples of more or less accidental foot selfies, where the foot becomes the central object

captured by the camera lens. In the last insect film, as in the Kapla video, the body's extremities are not part of the filmic diegesis, to put it in traditional film theoretical terms; instead, they are to be considered aids or tools on the film set and, as such, elements of the basic apparatus. Another telling example is a two-minute-long video made by a five-year-old girl of an illustrated song book, for which she turned the pages one by one with her left hand, while keeping the book in place with the aid of her right foot. The entire video is taken from a sitting position on the ground, continuously moving (or "panning") the camera from left to right, from one page to the next, trying to get the text of the songs in focus.

Low Horizon and Verticality

The notion of the child's body as tripod is especially relevant for videos based on whole body movements, such as dancing, walking, or running. As observed earlier, little thumb films are kinesthetic experiences involving not only the traditional five senses but also the so-called sixth sense of proprioception, or awareness of the body in space. They often consist of the exploration of the surrounding space from the perspective of the child's body, characterized by a low or absent horizon. For instance, in 2016, a six-year-old boy made a video in the waiting room of a medical facility by running around, shaking the phone and pointing its camera lens to the ground, occasionally capturing some of the seated people and crossing thresholds between rooms. Due to the lack of horizon and the brisk body movements, the calm waiting area becomes a site of adventure! The effect on the (adult) viewer is one of disorientating dizziness, but for the filmmaking child whose viewing experience is part of the basic apparatus it is just a way of looking, of exploring the world. We could say that, because of the jerky camera and unstable body-tripod, these types of films belong to the category of *ilinx*—the most disruptive of the four game categories identified by French sociologist Roger Caillois in his influential 1958 study *Les jeux et les hommes* (translated in 1961 as *Man, Play, and Games*)—as

the filmmaking child "momentarily destroy[s] the stability of perception" and celebrates the camera's (and their own) vertigo (Caillois 2001, 23).

The low horizon from the child's perspective is not a limitation (or affordance?) of today's digital media: the following anecdote takes us back to the early 1970s, when Jean-Luc Godard and Jean-Pierre Gorin were touring with their codirected films *Tout va bien* (*Just Great*, 1972) and *Letter to Jane* (1972) in the USA. During their stay at the University of Maryland, the two filmmakers had a discussion with the students about the emerging technology of video. In this particular context, Gorin told them the following:

> We've seen one interesting videotape. It was made by a friend of ours working in a Lower East Side school in New York. It's called *The Visit of the Chinese Ping Pong Team to New York*. This guy gave the Sony equipment to children. Because they are only so high, the only thing you see on the screen is pants. The media were all there, CBS, NBC, and you hear on the soundtrack people saying, "Why the hell are those kids running around?" That's the media. (Quoted in Kolker 1973, 132–33)

In a situation very different from what became Japanese filmmaker Yasujirō Ozu's signature of a low camera level, assimilating by means of a special tripod on the level of sitting on the ground (Schneider 2014), these kids in New York clearly had no other tripod at their disposal but their (too) small bodies.[14] What at first sight looks like a failure—only pants on the screen—is nothing else than the evidence of children appropriating media.

It is quite possible that the Sony equipment provided to the children of the Lower East Side school was the new video camera

14 For amateur film and video, the tripod is an emblematic object or an aspirational device that articulates both the supposed difference and potential fusion between the professional and the amateur mode of moving image production. See Schneider (2016).

AVC-3200 that came with a detachable electronic viewfinder, a small monitor placed on top of the actual camera, allowing one to view the black-and-white video image while recording. As with all cameras and camcorders, the default framing must have been horizontal, parallel to the low horizon of the small filmmakers. Filming with a cell phone, on the other hand, affords the choice between horizontal and vertical framing—the latter a new variant that the youngest generation of filmmakers began to explore in the early 21st century.[15] Soon the vertical framing becomes the default mode for making videos with a mobile phone, but at the beginning of the videophone era the options were still very open and children would alternate between the two modes. For instance, the five-year-old boy who got bored at the restaurant and made five videographic selfies with his mother's iPhone (described above) first used horizontal framing for three very short videos and then switched to vertical framing for two longer ones. The Kapla film was also filmed with the phone upright. Filming with a compact photo-camera does not give this freedom as it imposes horizontal framing for recording moving images. Some children, like the little girl filming a butterfly in the opening anecdote at the beginning of this episode, would challenge this default mode by rotating the camera. However, during the replay of the film, such an experimental framing is corrected, from vertical back to horizontal, hinting at the affordances of the device that cannot be overruled. Here it is worth noting that in the early days of the smartphone the device would not always recognize the exact framing, allowing children to play with it—for instance, by filming from a reclining position, or sitting on bed and pointing the camera towards the ceiling, they would "fool"

15 It was Sergei Eisenstein who advocated for exploring the aspect ratio in his famous 1930 lecture on the "dynamic square" (Eisenstein 1982). In the mid-2010s, exactly when children began to experiment with vertical framings in their videos, the Vertical Film Festival (VFF) was established as the world's first international competition for vertical videos, which ran from 2014 to 2018. About vertical framing in art video, see among others Ross and Glen (2014) and Napoli (2016).

the phone and impose an alternative or even combined perspective. During the replay, it would be difficult to say whether the video was shot vertically or horizontally.

Is the Phone the New Movie Camera?

The children of the early 21st century have become little filmmakers by using the compact devices of their parents, in particular by operating the phone as a camera. With their little thumb films, they are reinventing cinema. They are reinventing what would become a mundane and everyday practice of the audiovisual, by foregrounding the activity instead of the result, the making-as-playing instead of the outcome. What is at stake is the little thumb film not as film but as practice. In the next episode, we will look at the phone from the perspective of telecommunication genealogy. This might seem to contradict our general claim about the differences between Serres's Petite Poucette (who uses the cell phone to write text messages and do online searching) and our little thumb filmmakers (who are operating the cell phone to make digital videos). Yet the next episode will deal not so much with the smartphone but rather with the larger history of telephony and the practice of making phone calls, which still occupies a central place in children's imagination and (playing) activities today.

E P I S O D E T W O

On an early weekday morning, a seven-year-old girl helps her mother to empty the dishwasher. But instead of putting everything in place, she makes a telecommunication device. By holding a stack of glasses under her chin and a large spherical beer glass at her ear, she creates an ingenious low-tech telephone system with separate transmitter and receiver, which she uses to make a phone call. Is she aware of how she playfully evokes the vintage candlestick phone from the early 1900s? Is she imagining a future for this old device?

[Source: Private archive, 2014]

Children Imagined Futures

Each day and every hour, the telephone was my twin brother.
Walter Benjamin ("Berlin Childhood around 1900," 1938)

I Phone, You Phone

The first smartphone designed by Apple Inc. was announced at the Macworld Convention on January 9, 2007 and released on the USA market on June 29, 2007. This was not the very first smartphone on the market (which was arguably IBM's Simon Personal Communicator, released in 1994), but it was the first Apple smartphone, famously baptized the "iPhone." The name "iPhone" seems to suggest a reinforcement of the verb "to phone," but the "i" of the new generation of Apple products is deliberately written in lower case, without a capital letter, to differentiate it from the English first person singular. Introduced in 1998 with the launch of iMac, the lowercase "i" referred to "internet." During the iMac launch, Steve Jobs also included the following meanings in his slide presentation: "individual, instruct, inform, inspire" (Griffin 2016). Yet as regards the iPhone, we could argue that the first-person singular got somehow, from a grammatical point of view, de-capitalized: from I to i. Unlike iMac, iPhone is a homonym of a correct verbal construction: "I phone." The irony is that the object

it designates has become a device that is used for many other activities, among which "to phone" has become the least common one. It seems that the essence of the smartphone is precisely this: to be a phone that is no longer a phone.

Children capture this media flexibility of the phone very well, as demonstrated by the following two anecdotes. The first one takes us back to May 2016 when a group of second graders lined up on a little wall to be photographed by their mothers after an afternoon in the park. When one of the mothers took an old, almost obsolete compact camera out of her purse to take a picture, one of the children asked, with blatant astonishment on his face: "Is that your phone?" But the woman was not making a phone call, she was taking a picture! In the second anecdote, six years earlier, the exact opposite happened. A three-year-old got hold of a brand-new camera that belonged to a friend of her mother who was visiting. The girl, however, did not try to take a picture but immediately put the camera to her ear to "phone" her father. Whereas in the first anecdote the camera is mistaken for a phone that you use to take pictures (which is what you would actually do with a camera), in the second anecdote the camera is turned into a multipurpose device that you can also use to make phone calls. Both anecdotes illustrate that "the distinctness, differentiation and 'identity' of media devices have dramatically diminished in the last few years. . . . To take pictures or to talk on the phone have just become two possible functions of one single object" (Schneider 2010, 75; our translation).

On the one hand, even the youngest understand that the smartphone is everything except a phone (or almost); it is not only a camera but also a life organizer, a weather bulletin, a calculator, an internet surfing device, a gaming console, and device for media consumption. On the other hand, children turn all kinds of objects into phones, from compact cameras and remote controls, to playing cards, pocket-sized notebooks, stones, and showerheads. Basically, everything can become a phone, which children use in their play to make imagined yet real phone calls

to relatives, best friends from school, or imaginary friends. It is quite remarkable that one of the oldest telecommunication devices in the household—that around 1900 functioned as a "twin brother" for Walter Benjamin—has not disappeared from the imagination of today's children; on the contrary, it is still very present in their play. From a media-archaeological point of view, one could say that children push us to rethink cinema history from the perspective of the telephone, not only because most of them make their first films with mobile phones, but also because they understand at a very early age that the smartphone is the "killer application" of the digital image, as somehow predicted by Thomas Elsaesser at the beginning of the 21st century, before the introduction of the first-generation iPhone. In a seminal text about the role of the digital image in film history, Elsaesser (2005) hypothesized two possible futures for "digital multi-media" to conquer the mass market: either "the play station computer-game" as a true convergence device, following Henry Jenkins (as well as the Microsoft marketing strategy of the gamebox in the summer of 2001), or "the mobile phone as mini-laptop" (Elsaesser 2005, 15). Interestingly, Elsaesser also mentioned the role of children, yet not as interacting with the telecommunication device, but—more predictably or commonly—as videogame players: "Will it be . . . cell phones that win the day, or kids playing computer-games that simulate ever more sophisticated parallel worlds?" (2005, 15).

In this episode, we outline our media-archaeological framework by first expanding on Elsaesser's notion of imagined futures. This needs to be combined, as we will discuss, with an eye/ear for absences ("the dog that did not bark") and an attitude of genuine wonder in front of both the past and the present ("hermeneutics of astonishment"). Then we connect our being astonished with the notion of media archaeology as a practice or activity (*Tätigkeit*), which we consider in relation to both the traditional archaeologist's excavations and the bricoleur's way of reusing available materials. This allows us to conceive of

media archaeology as a laboratory, in which specific activities are carried out, means at hand are used, and ideas are tested through trial and error, precisely the way the child does in her play. Indeed, we propose thinking of children's play as a lab, as a concrete site and situation, in which they explore and experiment with media, operating and tinkering with their own media devices. Throughout this second episode, we look at concrete examples of DIY phones, that is, phone objects created, imagined, and repurposed by children. With these fabrications, as we will see, they make playful connections with the past, the present, and the future of telecommunication, and offer, like true media archaeologists, the possibility of rethinking media history in a plurality of possible genealogies.

The Productivity of Absences

Within the field of film studies, media archaeology emerged in close connection with early cinema studies, or the so-called Early Cinema Movement, that arose in the early 1980s in the wake of the legendary 34th FIAF Conference in Brighton, UK (Strauven 2006, 2013). This led to a revisionist or New Film History that problematized and criticized traditional historiographical methods, such as chronology, genealogy, and teleology. Different from Michel Foucault's Nietzschean genealogy, which is concerned with multiple origins and contingencies, the study of family trees had been—and in some standard surveys and manuals still is—commonly applied to the history of cinema to explain its "birth" as a (necessary, inevitable) confluence of three pillars of nineteenth-century inventions: the persistence of vision, photography, and projection. Elsaesser (2005) makes use of this three-pillar-based chart of cinema's genealogy to point out the absences, that is, the genealogies or families that are missing, not only from today's perspective but also from the perspective of the early days of cinema. For instance, one of the most obvious lessons that we learned from early cinema studies is that cinema was never silent, and that we need to include the history of sound

(technologies) in the chart. Part of this missing history is the human voice, especially that of the lecturer (or *bonimenteur*) who commented on the moving images, drew the audience's attention to certain details, or explained that the same action was shown again from a different perspective—the technique of temporal overlap being a typical trope of early cinema (Gaudreault 1980). What traditional film history had taken for an editing mistake or an immature way of telling stories could instead be explained by the forgotten role of the lecturer, that is, by what the film historian didn't have an eye for till then. It is a textbook example of what Elsaesser has called the principle of "the dog that did not bark" (2005, 21). This detective logic, borrowed from a Sherlock Holmes story, is based on the "ingenious deduction that the burglar could not have been a stranger, since the house was guarded by a dog—that did not bark." And, as Elsaesser adds, "The story makes a point, useful for historians and heartening to the media archaeologist, namely that the vital determinant might be the one you have overlooked, because its significance lies in its absence" (2005, 21).

In the early days of the 21st century, Elsaesser also drew attention to the absence of the telegraph and the telephone in the traditional conception of cinema's genealogy, making a claim not only about the Victorian desire for interactivity and instantaneity through some form of two-way television, but also about today's "cinema in the multi-media environment," of which the telephone is, of course, an integral part (2005, 18). It should be stressed that Elsaesser made this claim at the very beginning of the century, when the mobile phone was not yet a device with multiple apps and when Wi-Fi hubs were still rather exceptional and only used for very short access to the internet by the happy few. Cell phones would already have come with a rudimentary camera to take pictures and very short video clips, but it was too early to imagine they would entirely replace the inexpensive point-and-shoot cameras, let alone become an essential element of cinema's basic apparatus (as discussed in the previous episode).

In other words, Elsaesser's suggestion to include the invention of the telephone in the history of cinema was rather provocative at the beginning of the 21st century, or at least not as obvious as it might seem in the 2020s, now that the smartphone has indeed established itself as the "killer application" of the digital image.

What we are interested in is that Elsaesser's possible future regarding (digital) multi-media was somehow confirmed or anticipated by children in their play. Here we are thinking especially of children born in the early years of the 21st century, who witnessed the arrival in their households of the cell phone, and later of the first-generation smartphone—a new means at hand, among compact cameras and TV remote controls. It is indeed the smallness of the device that made it a good "fit" for the child's hand, as we have seen in Episode 1. Very early on, children were appropriating and repurposing the mobile phone, turning it into an all-encompassing media device, as if they were attracted—more than in the case of the play station—by its convertibility or reversibility. In the child's hand, as discussed above, the phone can easily become a camera and the camera as quickly a phone. But what is more, in their playful use of devices, children actually propose a different take on cinema history, along the lines of Elsaesser's approach; they urge us to consider telecommunication as part of cinema's genealogy and, more specifically, to write the history of the telephone into the history of cinema. And they do so in a truly media-archaeological fashion by intertwining possible pasts, presents, and futures, by reinventing, in their play, all sorts of phones from different "historical" periods—most often unknowingly. For instance, the girl in the opening anecdote of this episode was most probably unaware of the fact that she was reenacting a phone call from the past with her impromptu candlestick phone. She surely did not grow up in a household where these early phones with separate receiver and transmitter were present, but she cleverly chose different types of glasses to create her own device: a large beer glass functioning as the earpiece and a stack of water glasses held under her chin

as the mouthpiece. One might wonder whether the beer glass was chosen deliberately as a sound amplifier or distorter because of its spherical shape or perhaps, even better, as a technological seashell that lets you listen to the murmur of the absent/distant interlocutor.

Another example of ingenious telephony, again in the traditional form of a hearing and speaking system, is proposed by a two-year-old girl, who in the spring of 2010 called her grandmother from the bathtub while holding the showerhead to her ear. The improvised device created a long-distance connection, allowing for an imagined yet real phone call, that contained one of the little girl's first three-word sentences ("I phone Grandma") and a lot of baby talk. The child cleverly paused in her babbling so that her grandmother at the other side of the line could reply. In short, at the age of two, the child had already mastered the art of making phone calls, either by imitation of her parents or by firsthand experience (or both). To us, this playful bathroom situation has media theoretical/archaeological relevance on at least two levels. First, it shows us that the youngest children understand what the minimal condition is for the telephone to be fully operational: it suffices that there is another person on the other side of the line and, if there isn't, you just pretend there is. Second, in more technical terms, the two-way communication system comes in the shape of a very specific device: a handheld showerhead that—because of its attachment to the bathtub with a flexible hose—evokes the corded home phone. On its way to obsolescence, this type of phone could still be found in many households in those years, yet this was no longer the case in the one the little girl was growing up in. She might in fact never have seen a corded phone before improvising her own in the bathroom that day. So, like the girl in the opening anecdote of this episode, she is somehow reinventing a past she never knew. In media-archaeological terms, one could say that the playing child intertwines different historical layers, inviting us as media scholars to rethink the temporality of media history.

History of Possible Pasts, Presents, and Futures

As far as we know, the two girls did not recreate or repeat playing with these telecommunication systems, made with a set of glasses or a showerhead respectively; the two DIY phones are thus unique inventions. However, this does not mean that the girls did not make or improvise other telecommunication devices—quite the contrary. The phone regularly returned as a media fabrication in their play, as it does in the play of many other children. For example, in the summer of 2013, the latter now five-year-old girl made a phone call to her best friend with a collectible card, that is, a rectangular piece of cardstock (ca. 6 cm x 9 cm). Having just received a stack of those cards at the supermarket, she picked out the shiniest one, the one with a silver picture plane, and pressed it to her ear. While holding the rest of the cards in one hand like a smartphone, the "real" phone was hidden behind the other hand covering her ear. The girl called her friend from the street, relying—in her imagination—on a mobile telecommunication network, an ad hoc "other network" (Emerson 2025).

As for the historical context, these were the years that many cell phone callers became "cell internet users" (Duggan and Smith 2013). A 2013 study of the Pew Research Center documented that by then 91% of all Americans owned a cell phone and that nearly two-thirds of them (63%) used their phone to go online, a trend that was taking place in Europe as well (Duggan and Smith 2013; Bock et al. 2014). In terms of functionality, one could say that the five-year-old is using her improvised card-phone in an old-fashioned way, that is, as a device to make phone calls. Yet her device is thinner than even today's thinnest smartphones, so in terms of form it projects towards the future, towards the design of increasingly slim cell phones that can be stacked like playing

cards.[1] By pressing the card to her ear, the girl also anticipates a new hand gesture for making a phone call that is emerging in the 2020s, which consists of putting the top of your hand palm flat against your ear to say "let's call each other" instead of the thumb-and-pinky combination imitating a phone handset. Finally, the not-so-random selection of a glossy card points to something else, to another promise, which is not so much about the phone's slimness, but rather about its shininess, the smoothness of its surface becoming all screen—a new silver screen of reinvented cinema that fits perfectly in a child's hand.

One could argue that the three DIY phones represent three distinct phases of the history of telephony: the candlestick phone (past), the corded home phone (present), and the paper-thin smartphone (future). Thus, the girls activate different historical layers from within their present moment of play, somehow reversing (or intermingling) the old and the new. As media scholars we might also observe that the three phones problematize any form of chronology, even if we have put them—unproblematically—in some chronological order. For instance, the corded home phone, which more than ten years ago seemed to be on the way to extinction, is still available on today's market, especially for office use. Moreover, it is still marketed as a toy thanks to Fisher-Price's remakes of its Chatter Telephone from 1961, to be found not only in children's rooms but also in childcare institutions. In other words, the corded phone is kept alive as fake vintage, often more meaningful to the parent than to the child, like other nostalgia memorabilia.[2] The card-phone, on the

1 In 2011 and 2012, Corning Gorilla Glass produced a series of "design fiction" videos, entitled *A Day Made of Glass*, showing us a near future where all possible surfaces become interactive screens (Arcagni 2012, 77–85). Among those screens is also a filter-thin glass e-book that competes with the girl's collectible card in terms of thinness.

2 In the fall of 2021, Fisher-Price released a new version with Bluetooth, allowing for making and receiving real phone calls, targeted especially at adult consumers (Carey 2021; Liberatore 2021). Indeed, as we would argue, children do not need Bluetooth to make their improvised phones

other hand, combines an existing functionality with a new form or design, as a possible future or a future that is already in the making.

When looking at telecommunication devices created by young children, these DIY phones and their like, it is important we let ourselves be astonished. That is, we need to look at them with fresh eyes, without premeditated concepts, and genuinely be in awe: What are these kids doing? What are they grasping with their self-made media toys? What are they showing or telling us about media, their temporality, their functionality, etc.? Being astonished is what defines the attitude of the media archaeologist. According to Elsaesser, we should adopt this attitude not only with regard to the study of the past, but also when dealing with our present:

> Next to an *aesthetics* of astonishment for which Tom Gunning once pleaded, there should also be room for a *hermeneutics* of astonishment, where besides curiosity and scepticism, wonder and sheer disbelief also serve as the impulses behind historical research, concerning the past as well as the present. (2004, 113)

While conducting our research, we are astonished by children exploring the potentialities of media. And as such, as media scholars, we are practicing media archaeology as astonishment "with the future in front of us."[3] In the next episode, we will reflect more specifically on our position as parents/mothers, astounded by our own children.

In sum, Elsaesser's "hermeneutics of astonishment" is the driving force behind our premise that the child's play is a media-archaeological activity. We are letting ourselves be amazed by children's

operational, and they might be more inclined to use the Chatter phone as a pull wagon or a technological puppy on a leash, for that matter.

3 As suggested by Thomas Elsaesser during the Q&A of the presentation of his book *Film History as Media Archaeology: Tracking Digital Cinema* (2016) at EYE Filmmuseum in Amsterdam, October 14, 2016.

interaction with old and new media, by their repurposing of ordinary objects into media devices, and by their playful exploration of the potentialities and limits of mobile recording devices, such as the compact camera and the mobile phone. The activity of astonishment, of being astonished by the otherness with which children interact with media, is what for us opens new ways of interpreting media.

Between Excavation and Play

In the 2010s, the notion of media archaeology as a concrete activity gained ground within the field of (new) media studies, more particularly in connection with practices such as circuit bending and laboratorial experiments (Hertz and Parikka 2012; Roberts and Goodall 2019; Wershler, Emerson, and Parikka 2022). Such a practical conception of media archaeology fits the line of thinking of German media historian Siegfried Zielinski (1996), who described media archaeology as a "form of activity," borrowing the notion of *Tätigkeit* from Ludwig Wittgenstein. In Zielinski's words, Wittgenstein "adhered to the premise that philosophy is not something to be sat out on a professorial chair, but should be a continuous action of clarification in its very own medium, language" (Zielinski 1996). In *Tractatus Logico-Philosophicus* (1922), the Austrian philosopher famously claimed:

> Philosophy is not a doctrine it is an activity/Tatigkeit… The results of philosophy are not "philosophical sentences" but the clarification of sentences. Philosophy should make thought that is otherwise cloudy and indistinct, clear, and should sharply differentiate it. (Wittgenstein quoted in Zielinski 1996)

In the same way that philosophy must consist in clarifying sentences, media archaeology must be the "continuous action" of excavation into the media's past(s), present(s), and future(s), that is, the concrete activity or *Tätigkeit* of digging, uncovering,

discovering, rediscovering, etc., rather than the results of such actions.

Akin to the activity of the traditional archaeologist, media archaeology often takes the form of excavation: from digging into history and breaking its artificially conceived linearity, to delving into the archives and hitting upon hidden treasures, to opening up the media themselves and circuit bending them. Equally critical is that these various forms of *Tätigkeit* are carried out without any preconceived ideas, that is, that the (media) archaeologist looks afresh at the material traces of the past (or of the present, for that matter). Here we could evoke a passage from the 1983 novel *Palomar* (translated in 1985 as *Mr. Palomar*) by Italian writer Italo Calvino—a passage that takes place on the archaeological site of Tula in Mexico. Mr. Palomar is torn between the obsessive interpretation of every single detail by his erudite friend, on the one hand, and the somehow liberating attitude of a young teacher who insistently tells a group of young schoolchildren that "we don't know what it means," on the other. Attracted to the latter's attitude, Mr. Palomar reflects:

> A stone, a figure, a sign, a word reaching us isolated from its context is only that stone, figure, sign, or word: we can try to define them, to describe them as they are, and no more than that; whether, beside the face they show us, they also have a hidden face, is not for us to know. The refusal to comprehend more than what the stones show us is perhaps the only way to evince respect for their secret; trying to guess is a presumption, a betrayal of that true, lost meaning. (Calvino 1999, 97)

But then, even if one would wish to follow the path of the schoolteacher, one ends up interpreting. As Calvino concludes: "Not to interpret is impossible, as refraining from thinking is impossible" (Calvino 1999, 98).

Although it is not in the scope of this episode to outline the intricate relations between traditional archaeology and media

archaeology, we believe our project can fuel this relevant ongoing debate (Piccini 2015; Elsaesser 2016; Cavallotti and Dotto 2018). Especially pertinent seems to be a question posed by Diego Cavallotti and Simone Dotto as to whether media archaeology belongs exclusively to the field of media studies or if it can also be considered as one of the new branches of archaeology, like, for instance, the archaeology of childhood, to which we will return in the next episode. Cavallotti and Dotto take their cue from the Italian take on (traditional) archaeology, in particular from Andrea Carandini's distinction between history and archaeology:

> Archaeology, unlike history, is rooted in materiality because its primary goal is not the abstract and decontextualized reconstruction of objects or environments, but instead, as Carandini argues, "the anatomy of a territory." (Cavallotti and Dotto 2018, 33; our translation)

Defined as the "study of the material culture of the past," archaeology—according to Carandini—must draw on stratigraphy, and more specifically on its activities of both excavation and interpretation, for the archaeologist is "required not only to initiate the earthworks, but also to interpret the meaning of the different stratifications that the excavation makes visible" (Cavallotti and Dotto 2018, 35; our translation).

Returning to Calvino's story, interpretation is not only required but also somehow inescapable, and therefore imprisoning. We believe it is crucial, for our research on children and media, to take a step back, to purposely slow down the activity of interpretation as a form of liberation, following the path of the young schoolteacher who claimed, "We don't know what it means." When looking at children's self-made media devices and objects, we should first try to be astonished by them, "to describe them as they are, and no more than that" (Calvino 1999, 97).

Especially when the context is missing, or the child's background is unknown to us, we believe a "hermeneutics of astonishment" is vital, even if it is not always evident or easy to adopt. When

seeing pictures of (supposed) media creations by children posted on social media, we try to question the obvious, to look at them with genuine wonder, without being (mis)led by explanatory taglines, such as "selfie time."[4] While preparing a conference paper on the kid's selfie, we scrolled through many selfie lists online, often doubting the representativeness of the selected and posted photos, but at the same time looking for clues of (original) playfulness (Schneider and Strauven 2018). That's how a picture of two little girls holding a cracker in front of them, at eye level, caught our attention.[5] After a closer look, we let ourselves be stunned by the seriousness of their play, by their full immersion into the (supposed) media improvisation, and by the way they are intensely staring at the cracker, as if it were a screen of some mobile device—most likely a smartphone. Certainly, from a design point of view, there are some common features between a cracker and a smartphone, such as rectangularity, flatness, and "fit" (Cooley 2004). The way one of the girls in the photo is holding the cracker, between thumb and forefinger further confirms the analogy, and the fact that they are standing next to each another seems to justify the assumption they are taking a selfie or, more aptly, a "twofie." But, if this is really the case, we wonder: How is it that these two girls are not smiling or making a funny face? Are they too absorbed in their own image on the (imagined) embedded screen of the cracker-smartphone that they forget to pose? Maybe they are looking at some awkward selfies, possibly selfie videos, they took earlier that day? Or maybe they are watching a (non-selfie) video streaming? Let's point out how we

4 A *Das Magasin* journalist used this tagline on Facebook when he posted a picture of five South Asian children, all smiling and looking at a horizontally oriented flip-flop, held up by one of the boys who was standing in front of the group (Ziauddin 2019). In February 2019 this picture was going viral, after being posted by Bollywood celebrities, even if some claimed it was photoshopped or staged. See APB News Bureau (2019). Such claims of inauthenticity are difficult to verify, as we have no information about the photographer or the children themselves.

5 It was one of the "19 Photos That Prove Kids Crush Adults When It Comes to Selfies" (Illuminati 2014). The photo is reprinted in Strauven (2017).

are truly "astonished" but at the same time also take for granted that the girls repurposed a simple cracker into a fully operational media device that comes "with a double function: a camera to take pictures and a screen to look at" (Strauven 2017, 504). Other important questions are: Who took the picture of the two girls? And why? Was it staged or was it a true "snapshot"? Sometimes kids are indeed asked by their "astonished" parents to reenact curious media play, but here the seriousness and concentration of the girls seems to exclude that scenario.

If our media-archaeological activity primarily takes the shape of letting ourselves marvel at the child's interaction with media, we also literally put media archaeology "in children's shoes" (which in Dutch and German is an expression for "infancy" or "early development"). That is, we propose reinventing media archaeology, its methodology, its scope, its objects, by looking at the child's media play, and thus turn media archaeology itself into a *Spiel-Raum,* or "room-for-play," as suggested in our Prologue. Our activity of being astonished is reflected or, even better, triggered, by the children's activity of playing. With this book we want to shift the attention from our gaze as media-archaeological scholars to the media-archaeological activities of playing and filmmaking children, and ultimately consider children as media archaeologists. For this, we will now introduce the concept of bricolage as a media-archaeological activity, as we see it at the core of the child's media play. For children are "gifted at transforming things to their liking . . . known for their talent for creating an ersatz for an absent object" (Schneider 2010, 75; our translation).

Bricolage as Play with Means at Hand

Can bricolage be thought of as a variation of the activity of excavation? What exactly does it entail, both in practical terms and as a media-archaeological activity? First of all, we would like to stress the process that is implied by the notion of bricolage. In fact, *bricolage* is the French expression for "tinkering"—the

English gerund or "-ing" form capturing even better the dimension of activity, of doing, of doing-it-yourself (DIY). The activity of the tinkerer consists of combining pieces from various sources into something new.

In the study of French anthropologist Claude Lévi-Strauss, bricolage is defined as a mythopoetical activity, as a mythical thought that "expresses itself by means of a heterogeneous repertoire which, even if extensive, is nevertheless limited" (Lévi-Strauss 1966, 17). Jacques Derrida has reread Lévi-Strauss's notion in discursive terms, claiming that each discourse/text is a form of bricolage, based on concepts borrowed from other discourses/texts. As opposed to the engineers' creative thinking, which proceeds from goals to means, the bricoleur reuses available materials in order to solve new problems. Derrida writes:

> The *bricoleur*, says Lévi-Strauss, is someone who uses "the means at hand," that is, the instruments he finds at his disposition around him, those which are already there, which had not been especially conceived with an eye to the operation for which they are to be used and to which one tries by trial and error to adapt them, not hesitating to change them whenever it appears necessary, or to try several of them at once, even if their form and their origin are heterogeneous—and so forth. (Derrida 1993, 231)

The quote nicely captures many of the issues at stake in children's media play: the use of means at hand (for instance, glasses taken out of the dishwasher); the idea of adapting and repurposing (by which ordinary objects can become fully operational media devices); the process of trial and error (through repetition and variation of the same media play); and the general sense of purposeless, not goal-oriented creativity. We like to stress the moment of improvisation, of impromptu invention, inspired often by the objects themselves, the means at hand—like the showerhead, the cracker, or the shiny collectible card—which are literally taken in hand by the child and manipulated to her liking.

This same sense of improvisation, by which random objects are transformed into props, is pursued by the classical Hollywood musical. Here the activity of bricolage is of course staged, or rather the objects are purposely placed on the set to appear as means at hand. In the 1980s, Jane Feuer proposed reading the musical numbers performed by Fred Astaire, Gene Kelly, and others, as engineered effects of bricolage, that is, as a way of masking or hiding the elaborate process of engineering—or simply "work," as Jean-Louis Baudry (1974–75, 40) would call it—to achieve an effect of spontaneity:

> [Musical] performers make use of props-at-hand, things perhaps intended for other ends, to create the imaginary world of the musical number . . . The impression of spontaneity in these numbers stems from an effect of *bricolage* or tinkering. (Feuer 1980, 23)

Like Derrida, Feuer also refers to Lévi-Strauss's study of folk cultures, by pointing out that, "The *bricolage* number attempts to cancel engineering (a characteristic of mass production) by substituting *bricolage* (a characteristic of folk production)" (Feuer 1993, 5). Therefore, it is key that the prop of the so-called prop dance does not appear as a prop but as a "real" or real-life object; the coat rack that Astaire takes as his dancing partner in *Royal Wedding* (1951) or the mop and brooms with which/whom Kelly dances in *Thousands Cheer* (1943) "must give the impression of being actual objects in the environment" (Feuer 1993, 5).

In a memorable scene from *A Star is Born* (1954), Judy Garland turns her living room into a set of filmmaking, repurposing object after object, in a typical bricolage fashion:

> She turns on the lamp ("lights"), positions a table ("camera") and begins the "action." She uses the elastic bands of a chair for a harp, a pillow for an accordion, a lampshade for a coolie's hat, a leopard-skin rug for an African costume, the salt and pepper shakers for instruments in the Brazilian section. Her surprise at discovering each object at exactly

> the needed time makes us forget that these objects were carefully positioned there for her use. (Feuer 1993, 6)

This last example is particularly interesting because Garland is tinkering, through the musical number ("Someone at Last"), with her own film set which is not limited to props but includes all kinds of elements of cinema's basic apparatus, from the dolly camera (a rolling cart) to the framing of a close-up (by means of her own hands) to the home movie projector and projection screen in front of which she dances, her shadow being cast behind her as a true shadow play—all this for a spectator (James Mason). Among the many means at hand there is a telephone too, which is, however, used properly, that is, to make an improvised (and, as in the child's play, imagined) phone call.

In the play of children, we can recognize the same ease in taking and using means at hand, that is, objects "which are already there" and "which had not been especially conceived with an eye to the operation for which they are to be used," to repeat Derrida's words. But whereas the bricolage of the Hollywood musical is obviously staged, in child's play it is most often improvised. To a certain extent, the means at hand are controlled by the parents, but children also often use "prohibited" or "unfit" props, such as knives or matches (to which we return in Episode 5). Among the props are also existing media devices, such as compact cameras and cell phones, belonging to the child's parents and not uncommonly used without their knowledge. Here, we would like to mention the example of a four-year-old who, while dancing, made her first selfie video with an obsoleting digital point-and-shoot camera. The device had no front-facing (or selfie) camera, so she turned it around to capture her own image. Yet for the girl the camera was not merely a recording device but also a "real-life" dance partner, held at arm-length distance, as in a waltz—similar to the brooms, coat racks, and mops of the Hollywood musical prop dances. In fact, we briefly get to see a glimpse of this dancing partner, as its carrying strap swings along. Five years later, in the fall of 2017, the same compact

camera, by then even more obsolete, ends up in the hands of the girl's second cousin, who is only fourteen months old at that time and who is visiting with his mother. Actually, the little boy picks up all kinds of objects that he finds in this house where he has never been before, and sets them to his little hands (and his little ears) to make phone calls: besides the camera, he uses a remote control of an absent VCR and an old NOKIA cell phone, which he holds upside down occasionally, looking at the keyboard and pushing its buttons. One could say he is giving to these obsolete technological objects a new technological (toy) life. What matters for our argument is that they are all means at hand, that is, "instruments he finds at his disposition around him" (Derrida 1993, 231) and which he repurposes for his very simple media play of making phone calls.

Means at hand can be found not only at home, but also on the street, at school, in gardens and parks, or on the beach. In June 2020, at the Lido of Venice, two girls gathered pieces of washed ashore wood to build their own store, fully equipped with cash register, contactless payment system, CD player, and antique turntable. They also found two rectangular pieces of timber on which they drew a smartphone interface replete with app icons. Especially the youngest girl, aged eight, became fully absorbed with her DIY device, which she used both to make phone calls and to take selfies, that is, both as "ear-phone" and as "eye-phone." With the notion of the "eye-phone" (homonym of iPhone), we want to capture the relation between eye and hand while operating the smartphone, as opposed to the traditional use of the phone, where a relation between ear and mouth is at stake, as rendered most explicitly by the candlestick phone or the bricolage of glasses discussed at the outset of this episode.[6]

6 We are aware that the term "eyePhone" was already introduced in 2010 by the American animated sitcom *Futurama*, more specifically in the third episode of the sixth season, entitled "Attack the Killer App." Here it referred to a device placed directly into the eye. See Canning (2010).

The beach phone is a variation of the many paper and cardboard phones that children create and actively use in their play. Here we could mention the paper phone with bunny ears attached to it, made by the same eight-year-old girl a couple of months earlier. She would always carry the device with her until one day it was lost, much to her regret. Then there is the cardboard iPhone that a ten-year-old boy made at school for Father's Day, drawing the logo of his dad's favorite soccer team on the back (as the cover of the phone). The cardboard thingy became a means at hand for his little sister, who would use it all the time to make endless phone calls, to the despair of her mother, who once at a birthday party became really angry because of the girl's antisocial phone behavior (or *phonitis)*, as if the "fake" phone had become a "real" phone in the eyes of the mother too. A final telling example is a multilayered paper phone created by two second graders. Probably because of a lack of cardboard, they glued various layers of paper together to obtain a more solid material for their bricolage/collage. It became a mixed brand phone: on both sides of the paper phone they wrote SAMSUN(G), but on its back they added not only the camera lens but also the unmistakable apple-with-bite trademark.[7] Without words, this handmade toy tells us about the power of branding and the omnipresence of the apple as "electronic fruit" in children's mediascape and play.[8] Here, as in the case of the bunny phone, we can identify a form of bricolage that comes closer to crafting and collage, in the very literal sense of using paper, scissors, and glue. Yet the interest remains in the creativity of the bricoleur's mind, the tinkerer at work, whose play we consider as a hands-on laboratory where connections between different moments of media history and different media (and brands) are made.

7 This bricolage phone is also discussed, with illustration, in Strauven (2019).

8 It is remarkable that "apple" has become one of the first words that children of various mother tongues creatively write or "invent." Some examples of such intuitive, phonetically based spelling are: EPOL, APOL, APO, APEL, etc. Most often, children write these apple-words on their handmade media devices (in addition to the logo).

We think of child's play as a concrete media-archaeological lab, for which we focus on the situatedness of the experience. In the next episode, we will combine the child's situated play with the notion of "situated knowledge" following Donna Haraway's (1988) feminist approach, maintaining that object and subject should not be split but thought of in a profound bond. We are not interested in an infinite point of view, which would consider the child's play as something general or abstract; instead, we are looking into situated practices, that is, concrete, real-life situations, where children play and experiment with media.

As mentioned earlier, the notion of the lab has recently gained importance within the field of media archaeology, signaling a shift in the activities of the media archaeologist: from media history to media materiality, from historiography to hands-on practices (Fickers and Van den Oever 2014; Strauven 2019; Wershler, Emerson, and Parikka 2022). Regarding the origins of contemporary media labs as "sites of invention," of which the MIT Media Lab is an early example, Jussi Parikka suggests looking not only into the history of the scientific lab (such as the Edison Laboratory at Menlo Park for its invention of the modern R&D and Bell Labs for its principle of coworking) but also into the "parallel spaces of the studio (as in artistic creativity) and the seminar/library (as in the humanities)" (Parikka 2017). This lineage is further explored in *The Lab Book: Situated Practices in Media Studies* (2022), which Parikka coauthored with Lori Emerson and Darren Wershler. Here the authors adapt an "extended lab model" composed of analytical categories, such as space, apparatus, people, techniques, and the imaginary, and propose thinking of the laboratory as an "operative term":

> It does not simply signify, but operates in various institutional ways, in different conceptual contexts, and across historical periods to denote and connote what a lab

> should be, what a lab must be, and what a lab might be. (Wershler, Emerson, and Parikka 2022, 13)

In *The Lab Book*, the lab is defined as a specific space "in which the *process* of production takes place" (Wershler, Emerson, and Parikka 2022, 16; italics added); it is from the lab's "situated practices" that knowledge emerges—similar to what happens, as we see it, in the child's situated play.

Andreas Fickers and Annie van den Oever, on the other hand, claim that physical, hands-on contact with old media devices can help us to come to a better or more complex understanding of the past. Therefore, they envision the creation of media-archaeological labs to which museum and archive objects are transferred, de-auratized and de-aestheticized, and where "a hands-on, ears-on, or an integral sensual approach toward [these] media technologies" can take place (Fickers and Van den Oever 2014, 273). Referring to Michel Serres's sensorial theory, Fickers and Van den Oever plead that we rediscover our non-verbal, nonlinguistic "second tongue"—the one with which we can taste things—"in order to grasp the complex meaning of things" (2014, 273). We would claim that children do not need such a resensitization, as they engage through all their senses with old and new technology, appropriating and setting media devices to their own hands. They are, however, not in search of revivifying the past; instead, like genuine hackers, they are driven by curiosity to "explor[e] the limits of what is possible, in a spirit of playful cleverness," according to free-software activist Richard Stallman's definition of hacking (2002).

Hacking as a form of curiosity can be defined as a key laboratorial activity, that is, a very concrete way of doing media archaeology within a laboratorial context. Pioneering, in this respect, are the so-called zombie media workshops that Parikka organized in the early 2010s in collaboration with Canadian designer and DIY artist Garnet Hertz, which consisted of circuit bending battery-powered toys and their transformation into novel noise

machines (Hertz and Parikka 2011; Hertz 2015). Inspired by the work of circuit bender Reed Ghazala, the idea behind this simple practice of hardware hacking is to resist the so-called planned obsolescence of the media industry. Hertz and Parikka (2012) urge the contemporary media user to consider obsolete media as "zombie media"—not as dead media to be classified in Bruce Sterling's Dead Media Project, but as "media undead," a notion they borrow from Wolfgang Ernst. Unlike Ernst, however, Hertz and Parikka are less concerned with the original functionality or operationality of the media. Whereas Ernst (2011, 240) is interested in the operational survival of a technical artifact beyond its "cultural life span" (for instance, a Nazi radio is undead as it can still capture radio waves today), Hertz and Parikka are pleading for new uses of obsolete media through hacking, recycling, and repurposing, by changing the original operationality of the media devices. They believe that "media never dies"; instead, "it decays, rots, reforms, remixes, and gets historicized, reinterpreted and collected" (Hertz and Parikka 2012, 430). Zombie media are the living dead of both past and present, of both media history and today's electronic waste. They are not dead, but simply "out of use" and can be "resurrected to new uses, contexts and adaptations" (Hertz and Parikka 2012, 429).

Even if the children of our research project are not involved in electronic hacking, it is clear that their repurposing of the means at hand, be it ordinary household things, obsolete media, or cutting-edge technological devices, comes closer to Hertz and Parikka's notion of "zombie media" than to Ernst's purist view of the media's original operationality. Moreover, children seem to have a flexible or playful notion of media's temporality, both as operational and historical machines, as demonstrated by the opening example of this episode, where the present *tempus* of acoustic water glasses from the dishwasher connects with the past *tempus* of the candlestick phone. Through their play as laboratorial practice, children offer us a new perspective on media's

 temporality without clear distinction between past, present, and future.

Not "What" but "How"

Another main point of reference for our reading of the child's play as a lab is the didactic approach of Italian designer and self-made art pedagogue Bruno Munari. According to him, it is more important to teach about the process and the techniques (the "how") than about the results or artistic outcomes (the "what"). After a short career as Futurist artist in the late 1920s and early 1930s, Munari explored all kinds of arts and media, becoming involved in the reformist movement of the Italian school system, "Movimento di Cooperazione Educativa," together with Gianni Rodari and Giovanni Belgrano (Panizza 2009). In the late 1970s, when Munari conducted various workshops within the museum and school context in Northern Italy, his motto became: "Don't tell *what* to do, but *how* to do it" (quoted in Restelli 2002, 35; our translation). Instead of setting specific goals, Munari's workshops were process oriented. It was about giving children the space to be creative—not so much in the artistic meaning of the term, but rather in the sense of being free to explore and to think creatively. He showed, for instance, how to use the Xerox machine to make originals (instead of copies) by putting various means at hand, such as pieces of paper or their own hands, directly on the glass plate and then pressing the button. Or how to turn the mechanical slide projector into a mobile private exhibition device to project nonphotographic slides, made with herbs, flower petals or leaves, and all kinds of small and flat materials that could fit well between the glass plates of the slide (Munari 1977). In other words, Munari taught how to explore the potential of (modern) media devices, how to repurpose them, or use them "improperly."

Unlike Hertz and Parikka's zombie media workshops, these new (mis)uses were not inspired by media's obsolescence as a strategy of resistance but instead conceived as experiments

with new media devices. Indeed, both the Xerox machine and the mechanical slide projector were not (yet) obsolete in the 1970s, even less in the 1950s when Munari started this type of experimentation as part of his own artistic practice. He was thus exploring—and inspiring others to explore—novel approaches to novel technology.[9] From the perspective of Lab Studies, one can define Munari's didactic workshop (in Italian: *laboratorio*) as a "low-tech media lab" where elementary schoolchildren were invited to execute very simple hacking exercises with contemporary media devices.

Here we can make a direct link with children's exploration of the mobile phone in the noninstitutional context of their free play, as even the youngest do not need lessons in conceptual hacking to take the new gadgets of their parents into their own little hands and repurpose them. In their households, the cell phone is not (yet) a zombie media, belonging—like the mechanical slide projector in the 1970s—to the adult sphere and being designed for very specific uses. This was particularly true for some of the early iPhone apps that children may have discovered by accident and turned into DIY videogames.

In December 2014, for instance, a six-year-old who was frustrated by the fact that her mother refused to download game apps decided to transform her mother's game-free iPhone into a fully functional/operational game console. As with boredom, frustration can become a stimulation for the resourceful child to experiment with media. Here, the girl turned the compass app, which comes standard with the iPhone, into a video game. On first-generation iPhones, the app used to open, after a click on the compass icon, with a loading screen saying "tilt the screen to roll the ball around the circle." It is possible that the girl

9 Apart from his visual media experiments, Munari also organized so-called tactile workshops aimed at reversing the hierarchy of the senses and subverting the traditional museum "look but don't touch" ethos (Munari 2004; Strauven 2021).

intuitively made a connection with mini pinball games or maze games that improve dexterity skills. She repurposed the compass app into a game of speed and agility, balance and orientation, with spectacular visual effects—a very simple form of creative hacking that explored the limits of the app, and was nothing less than a piracy of its original function as designed by the industry. And what is more, the girl found a way to increase the difficulty, inventing always a next "level" by renegotiating, game after game, the rules she had herself established for it.

Around the same period, the girl also discovered the Voice Memos app, with which she started to make multiple recordings of herself singing, narrating, or noisemaking—a form of play combined with performance. During the recording, she would look very attentively at the movement of the sound wave, even trying to manipulate it by amplifying her voice or stretching certain sounds, such as: "Hellooooooo." Once recorded, she would play back these sound clips and look at them, as if fascinated by the traces left by her own voice. In other words, the sound file became for her a video to watch; the Voice Memos app was hacked, transformed into a graphic video maker. Something similar is at stake in the creative hacking of the scan app JotNot Pro, used by another six-year-old girl to record her body traces in a way that recalls Munari's improper use of the Xerox machine. JotNot Pro is an app to scan text documents and transform them into PDFs, but the girl found a way to turn it into a self-inscription device. The practice goes as follows: first you take a selfie, then you distort the graphic composition (going against the proper use of the app that is meant for correcting any perspectival distortions) and, finally, you convert the picture to a black-and-white PDF. This way the girl obtained a series of very artsy, black-and-white self-portraits.

The latter two examples of "app hacking" are particularly relevant as they capture and physically/digitally record the traces of the child's play, documenting the process that is at the center of Munari's didactic workshops, as is also the case with the little

thumb films (see Episode 1). In fact, the traces of children's media activities are often lost, leaving us only with the outcome or artifact. That is why the anecdote accompanying the artifact is so important for our research, as will be addressed in more detail in the following episode. For the moment, we want to focus on the experimental dimension of the bricolage, which consists in trying out new things and discovering special effects or experimental applications by trial and error, by repetition with variation, turning the play into a true media lab. Returning once more to Derrida's definition of the bricoleur, the girls are using the "instruments [they] find at [their] disposition around [them], [such as the iPhone and the apps] which are already there, which had not been especially conceived with an eye to the operation for which they are to be used [such as graphic videos and image distortion] and to which one tries by trial and error to adapt them" (1993, 231).

Two-Level Improvised Lab

We consider the child's play an improvised, noninstitutional lab, as it is not established with specific research purposes like academic archival institutions, such as MAL (Media Archaeology Lab at the University of Colorado Boulder) and MAF (Media Archaeology Fundus at Humboldt University, Berlin). Whereas (Digital) Humanities programs are setting up labs to bring teaching and research together, somehow similar to Munari's intent to turn children into researchers (more than artists) by stimulating their curiosity, the children of our research project are playing in their own lab, their play being the lab, where they are—ideally—left in full control. In other words, we did not set up labs for children; neither did we interview them about their play, but instead tried, as far as possible, not to intervene in their media bricolage.

Conceptually, the child's play functions as a media-archaeological laboratory on two levels: first, the play is a laboratorial space for

the children themselves, a space where they freely improvise and experiment with old and new media by trial and error; second, the play also becomes a lab for observation and theorization for media scholars, for adults who might be their parents or relatives (or friends of their parents or relatives) and who are "astonished" by the media-archaeological implications or connections made during the time of pure play. Ideally, as stated above, the child should be allowed to be in control and the adult should remain as invisible as possible. But is this ever really possible? What about the ethical implications, especially in our case where we are both concerned mothers and observing scholars? Additionally, children often outsmart us: once they realize we are interested in their media games, they may exaggerate or multiply them and, by doing so, alter our research results. And what is more, they are very good at involving adults in their play, more specifically, at using them as "means at hand," like a human broom or coat rack, in their bricolage. So, we as mothers might become part of the laboratorial activity that we as scholars observe and theorize.[10]

As a final case here, we would like to discuss the Nintendo stone, which is a unique device created by a six-year-old boy in 2011. It all started with the lucky find of a flat trapezoid-shaped stone, about 4 x 5 cm, on which the boy decided to draw some game-console features with markers: the "screen," a dark brownish colored area, occupied the upper part of the stone; and, underneath, were three "buttons" of different shapes, one with a cross, the second with the letter "A" in a blue square, and the third one triangular. Presumably, the button in the middle (with the letter "A") serves to turn the device on and off, while the other two are for moving left and right, respectively. At first sight, this elementary design evokes prehistoric drawings more than actual Nintendo buttons. But the intention was not to imitate the Nintendo console but to make a DIY game device, resulting from

10 For a reflection on the entangled researcher–subject problematic, see Behrendt (2022).

a basic form of bricolage. Maybe the simple fact that the stone fitted well into the two hands of the little boy was enough to turn it into a fully functional video game device, on which he could play endlessly. What is more, this unique media toy became a truly laboratorial device on a train journey, as the boy would invite strangers to game with him. The stone was handed around in the train compartment, which functioned as a spatially confined lab, in which adults pretended to play. The challenge, however, was not so much to pretend that the stone was a real Nintendo but to pretend that you agreed to the terms of the contract that you were pretending to play. In fact, children are no naïve players, and they are often ahead of the adults in this type of pretend play: it is not only about pretending (or doing "as if"), but also about pretending that you are pretending.[11]

What matters for our discussion is that the train compartment became the boy's lab and that he was pushing adults into become part of it. In other words, this is not a case of adultism where the intervention of adults is an interruption of the child's play. On the contrary, their intervention is essential, as they are "means at hand" in the boy's bricolage: they are collaborating in the pretend play and in making his DIY game console operational. The Nintendo stone also brings us back to Elsaesser's hypothesis about the possible "killer application" for digital multi-media as discussed at the beginning of this episode. The little boy takes here the second direction of Elsaesser's imagined futures: not the "mobile phone as mini-laptop," but the convergent play station scenario. With very basic means—a stone, a couple of markers, and some strangers on a train—the six-year-old inscribes himself

11 In *Homo Ludens* (1938), Johan Huizinga captures very well the complexity of the child's pretend play by employing another train anecdote: "Every child knows perfectly well that he is 'only pretending,' or that it was 'only for fun.' How deep-seated this awareness is in the child's soul is strikingly illustrated by the following story, told to me by the father of the boy in question. He found his four-year-old son sitting at the front of a row of chairs, playing 'trains.' As he hugged him the boy said: 'Don't kiss the engine, Daddy, or the carriages won't think it's real'" (Huizinga 2006, 103).

into the future lineage of "kids playing computer-games that simulate ever more sophisticated parallel worlds" (Elsaesser 2005, 15).

Who Is the Media Archaeologist?

Indeed, one might wonder who the real media archaeologist is in these and similar situations. Is it the child who playfully performs some media-archaeological bricolage, which the media scholar can reflect upon and be challenged by conceptually? Or is it the media scholar who simply labels the child as a media-archaeological practitioner, as she is intertwining various temporal/historical layers? Or is it a combination of these two *Tätigkeiten*? One could object that, by considering the child's play in media-archaeological terms, we are turning media archaeology itself into a child(ish) practice. On the one hand, our intervention in the field can be seen as a provocation, as a way of hacking media archeology itself. In the next episode, we will discuss further how our tweaking of media archaeology goes beyond a "pure" provocation, involving issues of gender and embodied scholarship (adopting Haraway's notion of "situated knowledges"). While the body of the researcher often remains invisible within the field of media archaeology, we want to counter this, or at least put it on the agenda. On the other hand, we believe there are concrete connections between the child's play and media archaeology on at least four different levels: 1) the notion of *Tätigkeit*, 2) historical entanglement, 3) material media excavation, and 4) object of knowledge.

First, media archaeology as *Tätigkeit* is echoed by the notion of bricolage, which is a concrete activity both in Lévi-Strauss/Derrida's terms and in the child's play. Unlike the Hollywood musical numbers, the child's bricolage is a "spontaneous, improvised, and ephemeral undertaking that emerges in everyday life without a theoretical background or interests in mind" (Keidl 2017, 25). Second, media archaeology as the intertwining of

temporal/historical layers is being realized, materialized, in the child's play, especially when her repurposing of ordinary objects involves old or new media devices, as we have seen with the candlestick phone, the showerhead phone, and the paper-thin smartphone—history referring not only to the past but also to the present and the possible future(s). Third, media archaeology as the excavation of the media themselves in order to explore their materiality as well as their operationality finds resonance in the child's play as a hands-on practice: not only is the physical contact with "raw" materials a central aspect of all the cases discussed but the self-made media are also fully operational, that is, they function like real media devices (even if they are totally useless or purposeless). By physically engaging with media devices, children are putting into practice some fundamental aspects of the "experimental media archaeology" pleaded for by Fickers and Van den Oever. Without falling into the pitfalls of the historical reenactment, as practiced especially at the Centre of Contemporary and Digital History (C²DH) founded by Fickers, children use their "second tongue"—according to Serres's sensorial theory—in a playful and present way: that is, through their play they explore the media in a fully experiential way in the present moment. This hands-on approach is a form of "thinkering," a combined act of tinkering and thinking, as the children show us how to rethink media.[12]

This brings us to the fourth and final dimension of the child's play for our media-archaeological research: the Foucauldian stake of media archaeology as an epistemological project whereby the "media" is constituted as an object of knowledge.[13] On the one hand, there seems to be a tendency towards medium specificity, allowing us as media scholars to identify various media genealogies in the child's play (as, for instance, the telephone or the game console). But, on the other hand, children clearly have

12 For the notion of "thinkering," see Huhtamo (2010).

13 Similar to how "madness" is constituted as an object of knowledge in Foucault's archaeology of knowledge (Strauven 2013).

a very flexible notion of media, which is implied by the possibility of turning one medium into another. Through their play, children seem to capture the essence of media, their minimal conditions, their limits, and their promises—for instance, the minimal condition for the telephone to be operational is that there is another person on the other side of the line, but there are also promises that come with new media devices, such as the phone as a companion, a bunny, a hacking machine, a game console, etc. The list is endless. In the following episode, we will see how the child's bricolage is always a situated practice, the reinvention of technical devices taking place in the concrete context of play, where artifacts and anecdotes are intrinsically tied together.

E P I S O D E T H R E E

patiuker *noun*

pat·iu·ker | \pət-'yü-kər\
: a hot-water bottle (preferably containing cooled water), positioned on your lap used as a laptop computer; a synonym for laptop computer.

First known use
2008, in the meaning defined above, by a three-year-old boy.

[Source: Public domain, n.d.]

Through Artifacts and Anecdotes

Every childhood achieves something great and irreplaceable for humanity. By the interest it takes in technological phenomena, by the curiosity it displays before any sort of invention or machinery, every childhood binds the accomplishments of technology to the old worlds of symbol.
Walter Benjamin (The Arcades Project, unfinished)

The Patiuker

The patiuker is a self-made media device, invented by a three-year-old boy in 2008. One day the boy was sitting on the couch and placed a filled but cooled hot-water bottle on his lap. He started moving his fingers on top of it, as if he were typing on a keyboard. And then he said "patiuker." With this newly created word, he turned an ordinary object into a media device. One may guess that the boy actually wanted to say "computer" to evoke a thing that seemed important to his parents and that he did not possess. Indeed, the neologism "patiuker" is phonetically close to "computer," which is the word his German-speaking parents used to indicate their laptops. Thus, strictly speaking, the term "patiuker" does not stand for desktop computer but for laptop computer or, in short, laptop.

The patiuker resonates with what we have discussed in the previous episode in relation to bricolage: a found object—"at his disposition around him" (Derrida 1993, 231)—is being adapted and repurposed by the boy for his media play. Fifty years before

Claude Lévi-Strauss theorized the concept of bricolage in *La Pensée Sauvage* (1966), artist Marcel Duchamp already worked with found objects or "means at hand." Among his so-called readymades is the famous *Fountain* (1917): not only was the object—a porcelain urinal—renamed and signed with "R. Mutt," it was also tilted on its back, no longer available for manly needs.[1] In the *Dictionnaire abrégé du Surréalisme* (*The Abridged Dictionary of Surrealism*, 1938) by André Breton and Paul Éluard, the readymade was famously—and supposedly by Duchamp ("M. D.") himself—defined as "an everyday object promoted to the dignity of an art object by the simple choice of the artist" (Duchamp 1938, 23; our translation). The patiuker might also be considered a readymade—in the Duchampian sense of an object "promoted" from ordinary life so that its functional significance disappears under a new title. The new title here is the name the boy gave to the object on his lap: patiuker. While one could argue that there is an artistic dimension in the child's play, we would rather insist on the differences between Duchamp's *Fountain* and the patiuker: changing its "useful" function makes the latter object not so much a work of art but a media object. The patiuker is also fully operational, which is not (always) the case with Duchamp's readymades. *Fountain* is not functional or operational as a fountain. Duchamp's gesture is not one of operating the device but instead an act of musealization or institutionalization (in a derisory way, of course, as the rejection of Art with capital A).

From a pedagogical point of view, one could ask why the boy created this laptop for himself and how the parents reacted to it. As media scholars, however, we are more interested in the question of whether there is something to learn from the object that the boy turned into a laptop and from the particular use that came with the DIY device. Why did he not choose another means at hand—a book, a notepad, or a magazine, to name just

1 The signature of R. Mutt has led to much speculation, including about the involvement of Baroness Elsa von Freytag-Loringhoven in the conception of the readymade. See for instance Gammel (2003, 222–26).

a few? One might speculate that it was the heat radiating from "real" laptops (and the possibility of burns) that made him pick a hot-water bottle, but this would imply that he actually had a sensory experience of working with a portable computer on his lap; that is, that he knew the feeling of the heated device on his legs. Another possibility would be to relate this particular use of the hot-water bottle to the phenomenon of laptop cushions or trays. In 2008, the same year the boy made his patiuker, bloggers cleverly thought of using the hot-water bottle to both ends: as a very cheap laptop cushion and for the prevention of the so-called toasted skin syndrome by filling it up with cold water. Knowing the family context of the boy, it is highly unlikely that the three-year-old ever had tried out such a laptop cushion, let alone that he had seen the relevant posts of the "water-cooled laptop stand" (Brinkmann 2008) online. Moreover, the boy's particular use of the hot-water bottle is truly different: it is not a laptop cushion but a laptop (or patiuker).

Interestingly, the boy's self-made laptop is "just" a keyboard, which might imply that he assimilates the device called "computer" by his parents mainly to the activity of typing, more precisely to moving your fingers quickly up and down on a responsive surface. Whether intended or not, a nice effect of his chosen object is indeed its pliant responsiveness—something a book or any other "hard" object would not have offered. But there is something else that is striking about this particular invention: it is a laptop without a screen. As the boy was not yet able to read, the words on the screen might have been less appealing to him than the act of typing. Yet he did not look at his fingers while "typing." Instead, he focused on an imaginary screen in front of him. So, in the end, the patiuker is not just a keyboard but a complete laptop with keyboard *and* screen.

The media objects of our project range from self-made media devices (such as telephones, TV sets, laptops, and cameras) to digital files (such as photos, videos, and sound recordings). There is a challenge at stake here, as we are dealing mostly with objects

that were not meant to be conserved but to disappear after play. While we treat them as objects in our study, we are well aware of their ephemerality. This is especially the case with the little thumb films, but our collection also includes repurposed and unaltered objects that children use as impromptu media devices in their play. This episode takes the objects and observations about screen-based media as a starting point for a new perspective on children's media play and their reinvention of cinema. We will introduce two key concepts that are central to our project: the artifact and the anecdote. In the case of the patiuker, the child created a material media object or artifact. Yet there is also an anecdote that goes with this ephemeral artifact: the story of a little boy sitting on a couch, typing on a keyboard, and looking at an imaginary screen, calling it a patiuker. We understand the artifact and the anecdote in two ways, that is, both as data and as conceptual tools. Before delving into this discussion of concepts, we would like to reflect on our own positioning as researchers within this specific research project.

In Episode 2, we argued that the child's play invited us to question the not-to-be-questioned or what is taken for granted, and thus to counter some dominant thinking even within the field of media archaeology itself. In this episode, we will explain why we advocate for a feminist turn in media archaeology. We begin with a brief flashback to the beginning of our research project and revisit Donna Haraway's seminal article "Situated Knowledges" from 1988. We then explore the notion of "toyness" from the perspective of the archaeology of childhood and enter into dialogue with a fictional archaeologist invented by French sociologist Bruno Latour. Latour's Actor–Network Theory (ANT) is a field of research where the concept of the artifact is key. Taking some cues from ANT and tweaking its inherent adultism will help us to better grasp how children understand media by producing, consuming, and engaging with technical objects. Lastly, we discuss what we call a heuristic of the anecdote. Here we refer to scholars such as Meaghan Morris, Sean Cubitt, and Hans Blumenberg.

In October 2010, Wanda had published a post on Facebook about her daughter turning a portable bike windshield into a TV screen on their ride home from daycare. By putting a colorful flyer in the plastic shield in front of her, the little girl created her own private TV. In other words, she merged two ordinary objects, a flyer and a windshield, into a media device. Wanda later incorporated this anecdote into one of her lectures of media archaeology at the University of Amsterdam. In retrospect, we realize that this specific anecdote was the catalyst for our joint research project that started at a crossroads of our lives when we were colleagues at the University of Amsterdam. At first, our scholarly discussions about media archaeology concerned mainly the mobility and portability of media. But once the TV bike anecdote had entered the classroom, we started a conversation about our observations at home, about how our own children were playing with media, and how their play offered new insights for our scholarly work.

We decided to start collecting material beyond our own homes by presenting exploratory papers about children as media archaeologists at international conferences and inviting people to share anecdotes with us. When we launched our *Kinderspiel* blog at the NECS conference in Milan in 2014, it was with the same intention of generating and collecting more research material from other homes. All this proved rather productive: colleagues and friends were eager to share private material with us and our corpus continued to grow, but at the same time we felt there was also resistance or skepticism among some colleagues. We were often asked how we would ensure that our research was representative enough, especially as we relied so heavily on private material and anecdotes. This type of questioning became irritating. It seemed to us that something strange was going on. For there are many examples of scholarly essays where male authors (Freud 1955; Huizinga 2006; Bordwell 2011; Ferri 2011; Elsaesser 2013) use anecdotes about children to establish a theoretical problem without further problematizing their relationship to the

child involved.[2] Our anecdotes apparently seemed "different," presumably more biased and, thus, less representative.

We are very aware of the bias of our research, as most of the children from whom we have collected material come from middle-class families living in European cities. Over time, however, we have come to realize that the argument of representativeness stood for a deeper unease about our work as mother-researchers writing from the "partial perspective" of our own (limited) situation, which could not from this perspective ever be impartial. Rereading Haraway's essay "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective" (1988) proved helpful in this respect. What we perceived as a double standard when it comes to using anecdotes about children to elaborate on a theoretical issue resonates with the opposition Haraway introduces right at the opening of her article, that is, the opposition between "we" (female/feminist scientists) and "they" (male/masculinist scientists). She writes:

> The imagined "they" constitute a kind of invisible conspiracy of masculinist scientists and philosophers replete with grants and laboratories. The imagined "we" are the embodied others, who are not allowed *not* to have a body, a finite point of view. (Haraway 1988, 575)

Central to Haraway's manifesto is the paradoxical notion of "embodied objectivity," by which she rejects the idea of an abstract or neutral position ("infinite vision is an illusion, a god trick" [1988, 582]), suggesting instead that true objectivity is only achievable through embodiment, limited location, partiality, and situated knowledge. In Haraway's words:

2 There are of course exceptions to this gender rule. For instance, there is the wonderful anecdote of going to the movies with her seven-year-old son narrated by Linda Williams at the opening of her article "Film Bodies: Gender, Genre and Excess." See Williams (1991).

> The moral is simple: only partial perspective promises objective vision. All Western cultural narratives about objectivity are allegories of the ideologies governing the relations of what we call mind and body, distance and responsibility. Feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object. (1988, 583)

For our project, the idea that objectivity is only possible through subjectivity, or through a profound bond between subject (the researcher) and the object (the child), turns out to be key.[3] As researchers with(in) a concrete body—and a body as mother—we cannot obtain an "infinite" point of view. With our embodied knowledge, we aim at an objectivity that is "subjective" so to speak, or at least one that lacks distance towards the object of study, as opposed to an infinite and fully "objective" vision that remains an illusion, a disembodied view from above.[4] Indeed, Haraway pleads for the acknowledgment of the "particularity and embodiment of all vision" that "allows us to construct a usable, but not an innocent, doctrine of objectivity" (1988, 582). Vital to such a feminist approach is the acknowledgment of the situatedness of knowledge and knowing.

More than three decades after the publication of Haraway's essay, the question of objectivity within science—from science labs to human sciences—is still a major concern. There is an ongoing need to advocate for a "doctrine of embodied objectivity that accommodates paradoxical and critical feminist science

3 Similarly, artist Ala Younis reflects on her "situated reading" of the Algerian TV film *Rakem 49* (1980), wondering how much it differs from a "general reading" (Younis 2023, 86).

4 As Haraway convincingly argues, the other end of the spectrum of a "bodiless" empiricism, radical constructivism, does not offer a way out of this dilemma, as it is, in the end, as much a totalizing position as a presumably objective perspective. What we rather need, according to her, is an epistemology that has "*simultaneously* an account of radical historical contingency for all knowledge claims and knowing subjects . . . *and* a no-nonsense commitment to faithful accounts of a 'real' world" (Haraway 1988, 579).

projects" (Haraway 1988, 581) also within the field of media archaeology where, in our view, the body of the researcher has been erased too easily. Whereas Paul Flaig (2018) has problematized the (patriarchal) neutrality and desexualized approach of media archaeologist Wolfgang Ernst, drawing attention to the technological female voices of the past (from telephony to talking dolls) and insisting that "media archaeology should have feminist critique as one of its own conditions" (Flaig 2018, 109), we believe it is equally important to rethink the situatedness of the (female) researcher. Our embodied knowledge is very literally shaped by concrete situations that can be defined as alternative locations for history writing and theory making. As pointed out by Philipp Dominik Keidl, our project inspires what he calls "public media archaeology," which consists of media-archaeological investigations and thinking practices beyond the boundaries of both academia and the art world. Indeed, with our research on children's media play, we emphasize "alternative localities for media archaeology, including playgrounds, kindergartens, schools, living rooms, and bedrooms, among others" (Keidl 2017, 21). By considering the child's play as a (spontaneous) lab, we also follow the lines of Maya Livio and Lori Emerson who plead for the recognition of feminist methodology in contemporary labs, aiming to restore the "importance of kitchens as integral to the history of labs" (Livio and Emerson 2019, 287). While stressing, like Keidl, private homes as alternative spaces for experimentation (and media-archaeological thinking), they also point out how these spaces were gradually appropriated by male researchers in the past and how their alternative histories should be written back in. As they claim, "these kinds of correctives can help to illuminate how marginalized knowledges have been excluded in the scientific codification of knowledge within labs, and more generally" (Livio and Emerson 2019, 290). Referring to Haraway, they also embrace partiality as one of the conditions for knowledge-making work:

> Feminist researchers have repeatedly demonstrated the impossibility of a neutral "view from nowhere," as even the most mundane research activities are knotted in subjectivity. Feminist labs should therefore work towards, as Haraway argues, "partiality and not universality [as] the condition of being heard to make rational knowledge claims." (Livio and Emerson 2019, 291)

From Haraway's seminal article we retain not only the partial view and the embodied/situated knowledge production, grounded in a close and even intimate connection between subject and object, but also the fundamental idea of our object of study as an actor (or active media archaeologist). As Haraway writes, "Situated knowledges require that the object of knowledge be pictured as an actor and agent, not as a screen or a ground or a resource" (1988, 592). And she adds:

> Indeed, coming to terms with the agency of the "objects" studied is the only way to avoid gross error and false knowledge of many kinds in these sciences. (Haraway 1988, 592–93)

Children are both the objects and the subjects of our project, as they are the makers or producers of materials—from pretend play to little thumb films, from DIY media devices to playful hacking practices. In other words, we should distinguish between the child as an object of study and the artifact made by the child, which in turn also becomes an object of study.

The Artifact as Error and the Challenge of "Toyness"

In Merriam-Webster's online dictionary, the artifact is understood in two ways: as an object "showing human workmanship" and as "a product of artificial character," including errors, such as "a defect in an image (such as a digital photograph) that appears as a result of the technology and methods used

to create and process the image" (*Merriam-Webster*, n.d.). In this latter sense, an artifact can be any type of error in the perception or representation of information: for instance, a misrepresentation of tissue structures (in medical imaging), an unintended alternation (in forensics), or a disturbance (in digital compression). From the *Oxford English Dictionary*, we learn that this meaning of the artifact as error derives from science, where an artifact is understood as a "spurious result, effect, or finding in a scientific experiment or investigation, *esp.* one created by the experimental technique or procedure itself" (*OED*, n.d.). In this definition, the artifact is a kind of distortion or improper use of an object.

Most commonly, the artifact is defined as a man-made or man-modified object that is "distinguished from a natural object" (*Merriam-Webster*, n.d.). Such a notion of the artifact allows us to reconnect with traditional archaeology. Here, the artifact is—to put it simply—an object recovered from an archaeological site that has the potential to tell us something about its human creator and user(s). However, the distinction between human intervention and natural process is questionable, even in the field of traditional archaeology, as it is not always easy to classify things either as artifacts or as naturally formed objects (stone formations would be a case in point). It gets even more complicated, but also more relevant for our research project, in the specialized field of the archaeology of childhood (Crawford 2009; Crawford, Hadley, and Shepherd 2018). As pointed out by Jane Eva Baxter, child-structured play is "less visible archaeologically because [it] does not always incorporate artifacts that are identified as toys and occasionally it may fall beyond cultural conventions for the use of social space" (2005, 63; quoted in Crawford 2009, 62).[5] Like-

5 Children's play can be divided into two kinds: "adult-structured play, in which the adult supplies the toys and the children are guided in play conforming to adult agendas, and child-structured play, in which children's play and toys are created by the child, independently of adults" (Crawford 2009, 61).

wise, Sally Crawford has argued that children's material is often missing in archaeological records because it is not detected as such—not least due to the discipline's traditional adultism. And this results in a problematic and distorted categorization:

> By categorising toys with reference to adult constraints and perceptions of "toyness," I would suggest that we are attempting to organise child-world into an inappropriate adult-world. (Crawford 2009, 62)

In a child's hand, nearly anything can become a toy: sticks, stones, a piece of bread, to name just a few examples. Crawford calls it the "toyness" of objects and concludes that, "with rare exceptions, *all* objects have and had the potential to be used by children as toys," as "being a toy [is] a variable but possible proportion in the life-cycle of any object" (2009, 67). The life cycle of the object is from adult (proper) use to child (improper) use, which is how toys undoubtedly do survive on archaeological sites but remain invisible to the traditional archaeologists because they only look at them through the lens of the proper adult use and therefore miss their "toyness." In their introductory chapter to *The Oxford Handbook of the Archaeology of Childhood* (2018), Crawford together with Dawn M. Hadley and Gillian Shepherd point to the "toy paradox" as a consequence of our Western conception of childhood. On the one hand, the presence of playthings on an archaeological site would be the most obvious evidence that there must have been children playing with them. On the other hand,

> That same modern western association between "toys" and "children" is inextricably linked to a third modern western concept that positions "children" at the opposite end of the spectrum from work. Work is serious, important, adult; children's activities are, by contrast, playful, unimportant, childish. (Crawford, Hadley, and Shepherd 2018, 17)

 And the authors continue:

> The identification of an object as a "toy," which in theory should make the study of childhood at a site relatively accessible, typically ensures that this class of objects will receive no further detailed consideration: toys are not relevant to "mainstream" archaeological study. This is the toy paradox. (Crawford, Hadley, and Shepherd 2018, 17)

In short, traditional archaeology has a twofold problem with adultism: While on the one hand it would "only" recognize objects as toys that seem obvious to the researcher, at the same time, once something is considered a toy, it is no longer of scholarly interest. On a side note, we might say that the "toy paradox" gets yet another layer of meaning if we add the history of consumer capitalism. Media toys are perfect examples of how commodification reproduces the distinction between the adult and child worlds by turning media devices into "child-appropriate" and therefore legitimate toys. Think about all the rather well designed and playful media toys by the Fisher-Price Company, such as the Chatter Telephone which we briefly mentioned in the previous episode. Yet, when toy phones are available, children seem to prefer to play with the "real" phones of their parents or craft their own devices. Here we would like to mention the ingenious bricolage of a two-year-old girl who made a photographic device with sound effect by combining two toys: a View-Master and a kazoo. She would put the kazoo in her mouth and hold the View-Master close to her face in a reversed way, that is, looking through its stereoscopic double lenses from the "wrong" side. Then she would "take a picture" by pulling down the View-Master's lever and blowing on the kazoo at the same time.

There seems to be an energy in children's play that transgresses all commodification. Or to quote again Walter Benjamin:

> We must not forget that the most enduring modifications in toys are never the work of adults, whether they be

> educators, manufacturers, or writers, but are the result of children at play. (2005a, 101)

Let us consider, once again, the patiuker: it is the result of a child at play and not the work of a game manufacturer; it is an artifact belonging to the adult sphere that is being modified into a toy by a very simple gesture in a child's play. Because it belongs to the adult sphere, future archaeologists might indeed misread it and overlook its "toyness."

The Berlin Key: Pre- and Proscriptions

In his famous essay "The Berlin Key or How to Do Words with Things," Latour uses an invented archaeologist as a MacGuffin or narrative device to structure his argument. The eponymous key of the text, Latour writes, is "the sort of object which, though it may gladden the hearts of technologists, causes nightmares for archaeologists" (2000, 10). He then points out that archaeologists are "the only ones in the world to study artefacts that somewhat resemble what modern philosophers believe to be an object" (Latour 2000, 10). While we usually refer to the devices of children's media play as "objects," as philosophers would do, we might want to reconsider them more explicitly as "artifacts," as they come with pre- and proscriptions. Latour borrows from archaeology not only the notion of the artifact but also its epistemological challenge: How do we "read," "understand," or even "unbox" the function of a (technological) artifact when it comes without explanation? What do we do with an object that at first sight seems "unreadable," as is the case with the so-called Berlin key?

The Berlin key is a key with two identical/symmetrical bits on both ends. It cannot be withdrawn after being rotated like a normal key but must be pushed horizontally through the lock to the other side of the door, so that the user is required to relock the door once inside in order to retrieve the key. But during the day, as

Latour points out, the door cannot be locked if a concierge blocks the system with a passkey:

> The concierge, and he alone, could bolt or unbolt the door as he pleased, by inserting his key in a horizontal position but then withdrawing his key as one does in Paris, remaining snug on the side where his lodge was. (2000, 16)

This closing mechanism was filed for patent in 1912 and has since then been used in communal doors of Berlin apartment houses, in some places still to this day. For Latour this piece of engineering is a (semiotic) sign that "tells" to lock doors at nighttime but never during the day. It demonstrates that the artifact is not just a passive sign; according to ANT, artifacts are "embodied actions and knowledges" (Shiga 2007, 40) and as such they pre- and proscribe certain actions—here, whether to lock the door.[6] In Latour's own words: "The beauty of artifacts is that they take on themselves the contradictory wishes or needs of humans and non-humans." And the French sociologist and philosopher continues:

> If you study a complicated mechanism without seeing that it re-inscribes contradictory specifications, you offer a dull description, but every piece of an artifact becomes fascinating when you see that every wheel and crank is the possible answer to an objection. (Latour 1992, 247)

This applies equally to media devices such as smartphones, compact cameras, and computers that children interact with and to the phones, laptops, and game consoles that they build for themselves. No electronics, wheels, and cranks are involved, but paper, glue, and other bricolage material. Nevertheless, their homemade media devices, be it a television or a patiuker, are the

6 As is well known, ANT offers a new perspective on the relationship between the human and the nonhuman in society. As John Shiga notes, "ANT does not deny that there are differences between human and nonhuman entities, but it does challenge the asymmetrical view of the social world as constituted by human actors who impose their will upon passive artifacts" (2007, 43).

product of a thoughtful design process and as such embed action and knowledge; these artifacts come with their own specific pre- and proscriptions or, more simply, their own "dos and don'ts."

Handmade Paper Devices

To afford a better understanding of the process of designing and making paper laptops, we will discuss a few examples of the many paper laptops we came across and collected for our project. An apparently very simple fabrication is the paper laptop made in 2013 by a frustrated seven-year-old girl who had begged her parents for an iPad. When she did not get what she had asked for, she decided to make her own device. She took a sheet of pastel green craft paper and folded it in two. Then, with a green marker, she drew the contours of a big apple-with-bite and wrote the name "apel" (with one p) on its cover. When opening the sheet, there is an empty screen in the upper part (above the folding line), while the lower part contains the keyboard, mainly consisting of numbers (from 1 to 70) and a spacebar. But the girl also provided a dark green paper strap at the top of her laptop, turning the drawing into an actual object. It somehow evokes the old iBook that came in different colors, the so-called Clamshell, introduced by Steve Jobs in 1999. One could claim that the girl was just imagining a laptop in a protective case or sleeve with a handle, but she also made a separate bag to go with it. In other words, the strap really belongs to, and is attached to, the laptop. And as such it prescribes a certain use: it is designed to carry the device. What this detail brings to the fore is the child's understanding of a key dimension of contemporary media devices, namely, their portability.

Then there are the various travel kits children make for their parents for when they go on business trips. For one such occasion, a six-year-old girl made a mini laptop out of a 10 x 10 cm square piece of paper folded in two, accompanied by a mini paper mouse and mini paper charger, neatly cut out along their

contours. As in the case above, the screen is left blank while the keyboard contains numbers and letters in alphabetical order. Last but not least, the cover of the laptop and the mouse bear the unmistakable Apple logo. In Episode 2, we have already stressed the power of Apple's branding and the omnipresence of this "electronic fruit" in children's mediascape, when discussing the example of the "contaminated" Samsung paper phone. As this episode is centered on artifacts and anecdotes, we would like to recall here the poisoned apple that was found next to Alan Turing's deathbed on 8 June 1954. The legend goes that Turing's half-eaten apple, laced with cyanide, inspired the Apple logo. However, as it turns out, the idea behind the bite of the Apple logo is rather a matter of scale and proportion: the full mouth bite indicates that the fruit bitten into must be—in terms of size—bigger than, for instance, a cherry (Conradt 2015).

As well as portability and branding, children also seem susceptible to complex operability as articulated by the next artifact, a "computer-for-mama," another paper device, made in 2014 by a seven-year-old girl. Again, there is a rectangular screen in the upper part of a folded paper, but this time the screen is not empty. On three separate lines, the girl wrote "To," "from," and "subject"—all followed by a colon and wiggly lines. Then she scribbled the greeting "Dear" and drew seven wiggly lines under each other—like a placeholder or dummy text—preparing, as it were, an email ready to be sent off. Here the keyboard, located beneath the screen, contains not only keys for all numbers and letters (arranged, once again, in alphabetical order) but also some functional keys that give direct access to services, such as YouTube, Google, Safari, Google Maps, and Google Earth, which the girl is clearly familiar with. This object indicates how young children think of a computer not only in terms of a writing or calculating machine, but also as a media platform for watching moving images, a search engine, and a mapping and geo-positioning device. But there is more. On top of the preexisting services, the girl also included additional buttons that transgress

the virtual world. There is for instance a button for sending flowers, one for money, and another for transmitting love and happiness. As the girl explained: "You push the button and you get real flowers, real money, love and happiness." The child not only imagined a possible future application or app (enabling one to teleport objects and emotions), she actually made one—because in her imagination or pretend play, the device is fully operational.

Another fully operational screen-based device was created in the fall of 2023 by a group of fourth graders at school and completed (or, rather, upgraded) by one of them at home: a wooden smartphone with a renewable/refreshable screen. The device has transparent plastic foil taped to the screen side, where you can "swipe" through different screens by changing papers under the foil. The little screen-sheets are stacked under the plastic. Like the abovementioned device that allows for teleporting objects, this phone offers a Google search "screen" where, besides searching the meaning of words, you can also buy a present for your friend. The mother, who shared this material with us, told us she seldom sees her daughter using the device as a media object in her play; instead, the girl is always busy modifying and improving it by extending the library of screen-sheets. One might be tempted to conclude that, in 2023, it is all about continuously updating and upgrading your device. Conversely, the wooden phone shows, as argued in Episode 2, that the bricoleur reuses available materials in order to solve new problems, as opposed to the engineer who proceeds from goals to means.

Although these handmade media devices might not be considered technological in the strict sense (as they lack an intersubjective functionality, or, in an engineering sense, function), they are nevertheless designed to "work" or to "function," and to solve certain problems. In line with Haraway's claims for partiality, rather than qualifying them as nontechnological, we should ask what these objects teach us about a normative understanding of both functionality and technology. From this perspective, the

media objects under discussion can be seen as technological artifacts. Here Susan Leigh Star and James Griesemer's influential concept of "boundary object" proves helpful. In Science and Technology Studies (STS), a boundary object is a thing or a theory that is understood differently by different groups or individuals, without losing its integrity (Star and Griesemer 1989).

For our argument, Latour's idea that the artifact embeds pre- and proscribed actions is crucial. The child crafts an artifact—just as a key maker designed the Berlin key—and this artifact bears the traces of certain characteristics of a media device that the playing child associates with it. A remarkable aspect about children and media is that they often transgress the pre- and proscriptions of artifacts, by misusing and repurposing them. Understood in such a way, it is indeed the child who (implicitly) acts like a media archaeologist as she tries to unbox media devices by tinkering with them in her play. The child pre- and proscribes actions into artifacts that we as scholars then try to "read."

But there is also a dilemma that comes with ANT's approach to artifacts, which is called—as already discussed above—the obstacle of "adultism" in childhood studies (Bell 1995), referring to the implicit equation of human beings with adults and therefore the exclusion of the child. The technological sophistication of a Latourian artifact in terms of engineering, design, and production in an industrial context (other examples in his work are the computer and the Xerox machine) reveals STS's hidden adultism. We argue that it is worth rethinking the strict opposition between hi- and low-tech, or pseudotech, and between the adult and the child worlds, by looking at what happens when these boundaries are blurred and transgressed.

The Anecdote as Epistemological Tool

Returning to the case of the patiuker, we realize that if we had only had the artifact—the hot-water bottle—it would probably not exist as an "event" for our project. Not only is its "toyness"

rather precarious, but also its "medianess" is not so obvious. The hot-water bottle becomes a media object only because of the way the boy uses it. The patiuker came to us as an anecdote. It was only through the anecdote that the name and use of the device were conveyed, including a description of how the boy sat down, placed the bottle on his knees, typed with his fingers, and looked at an imaginary screen.

Like the traditional archaeologist, we need additional data or contextual information about the artifact to understand it. Some examples in our project are based on (participant) observation, for others we rely on anecdotes. This is especially the case for those "events" that took place before our project began, such as the patiuker anecdote that was transmitted as a "funny" story. Another example is the childhood memory of a man who grew up in the 1970s and used to watch television in front of the round glass door of the washing machine, hypnotized not only by the motion of clothes inside but also and especially by their colors, as this was a feature that the "real" TV at his home did not (yet) offer—an anecdote that someone shared with us at a conference after a presentation of our research project.

The Greek etymology of the word *anekdota* means "unpublished items." An anecdote is commonly understood as a "short narrative of an interesting, amusing, or biographical incident" (*Merriam-Webster*, n.d.). And indeed the story of a three-year-old typing on a hot-water bottle that he calls a patiuker fits this definition perfectly. In literary studies, according to the *Reallexikon der deutschen Literaturwissenschaft* (Encyclopedia of German literary studies), an anecdote is understood as "a short, at first oral account of an odd incident that—credibly but not testified—happened to a well-known person and is remembered for its witty ending" (Schlaffer 2007, 87; our translation). To insist that the "odd incident" must have happened to a "well-known person" is a rather normative understanding of an anecdote that says more about the object of knowledge of conventional literary scholarship than about the anecdote itself. But problematic

normative implications can also to be found in the definition in the *Oxford English Dictionary*, where an anecdote is not only a "short account of an amusing, interesting, or telling incident or experience," but can also imply "superficiality or unreliability" (*OED*, n.d.). It is this latter connotation that makes the anecdote a controversial tool for scholarly inquiry.

In the humanities, there is a renewed emphasis on and increased interest in the anecdote as an epistemological tool. As we will discuss in the remainder of this episode, at least three aspects of the scholarly debate about the anecdote are productive for our methodology. First, the anecdote as an epistemological tool invites consideration of the mundane or even "trivial" in everyday stories. Or to put it differently, the anecdote allows us to take into account that which is often suppressed by academic research. This particular understanding of the anecdote can be found in feminist, queer, and decolonial contexts (Morris 1984, 2006; Gallop 2002; Menon 2022). Second, there is an emphasis on the uniqueness and specificity of the anecdote (Cubitt 2013, 2020). And, third, the anecdote might even have potential as a historiographical intervention—an aspect suggested by Joel Fineman (1989) and Paul Fleming (2011a, 2011b).

The Anecdote and the Mundane

Intersectional and queer scholarship, in both human and social sciences, has produced critical reflection on the formats we use to think and communicate our scholarly work. In these discussions, the "conventional" academic paper is challenged as a format of distinction and exclusivity that acts as a gatekeeper between an inside and an outside of "proper" academic work. Pioneering in this regard was the approach of Audre Lorde (2007) who proposed using poetry in order to transgress the conventions of academic writing. Another example is Lauren Berlant's essay "On the Case" (2007), which introduces a special issue on the concept of the case. Berlant reminds us that the case as a genre "hovers about the singular, the general, and the

normative" and, at the same time, it "can incite an opening, an altered way of feeling things out, of falling out of line" (2007, 664 and 666). A more recent example of the questioning of certain formats is Sara Ahmed's *Complaint!* (2021), in which she critically reflects on the abuse of power and the methods used to stop complaints in an institutional context.

These ideas are part of a broader feminist and queer reflection on scholarly formats, including the anecdote, as epistemological tools (McGregor 2019). Key here is the work of cultural studies theorist Meaghan Morris, in particular her essay "Identity Anecdotes" from 1984 and her 2006 anthology of the same name. Anecdotes allow Morris "to create a subtle analysis of the multiple temporalities and different histories people bring to their uses of culture" (Gregg 2004, 369). For her, an anecdote "always has a point" (Morris 2013, 136). In her critical take on the notion of the everyday, Morris points out that anecdotes are particularly helpful in expressing differences between different perceptions or interpretations. This understanding of the anecdote helps us not to forget to look out for contradictory articulations. In *Anecdotal Theory* (2002), literary scholar Jane Gallop sees a tactical potential in the anecdote, as it helps to bring ordinary stories that are all too often repressed into theory—at least in literary theory (and media theory, one might add).

From the scholars mentioned above, we learn that the anecdote is both a tool for introducing the mundane into scholarly discourse and something that helps to destabilize established hierarchies, between high and low, for instance, between art and craft, and also between right and wrong. Let us now discuss some specific anecdotes about children and their fabrication of TV sets, or how they associate the television with certain promises. The first example is a glossy wall calendar with color photographs of animals hanging in a child's room, which was described by a three-year-old as "the television in my room" in 2008. This calendar-as-television foregrounds the television as a screen for displaying images. Like the patiuker, it is through

words ("the television in my room") and a specific bodily gesture (looking at the calendar-as-television by sitting in front of it on the ground) that an ordinary object is fabulated into the desired media artifact. The TV calendar has a rectangular shape and a horizontal orientation. From today's perspective, we could call it a flat screen TV, with which the boy was not familiar at the time, as flat screens only began to dominate the television market in 2009. Apart from the glossy image and its flatness, another remarkable characteristic of this TV calendar is that it is always turned "on." By flipping the calendar pages (which we are not sure if the boy ever did), changing channels is possible, but the images would remain still, without movement.

The second anecdote is about a seven-year-old girl who prepared a treasure hunt with several riddles for her grandparents at their holiday home by the sea. One of the riddles read: "It's magical and black, but sometimes lots of colors come out of it." The solution: the television! Here the television is an existing media apparatus. It is not a flat screen on the wall but a small portable one on a little table. According to the riddle, it is all about the magical moment of "turning" the television on, whereas the TV calendar of the previous anecdote is about being always "on," not as a calendar but as a TV. It is always on, even if its image is frozen in stillness. A display of still images is also at the center of our third example, which consists in repurposing a foldable children's table into a TV set. This fabrication reminds us that a television can both resemble a painting (as in the case of the TV calendar) and function as a piece of furniture.[7] The top of the table in question had colorful drawings of the Abudiga script (Thai alphabet), and each letter was accompanied by a picture of an object beginning with that letter. By turning the tabletop sideways in a storage position, a four-year-old child transformed it into a screen with images. Here it is all about the physical arrangement of the viewing setting: the table becomes a screen as soon as its colorful

7 About the TV set as furniture, see Spigel (1992) and Miggelbrink (2018).

surface is no longer in a horizontal but in a vertical position. Like the case of the TV calendar, the screen is a physical location for a (still) image; it is a surface for the representation of "content," but without movement or sound, suggesting that those specifics are perceived by the children as nonessential characteristics of a television. Or we could argue that both sound and movement are not a requirement, as they can be produced in the child's imagination.

The Anecdote's Specificity and Uniqueness

In his book on ecocriticism, media scholar Sean Cubitt (2020) pleads for "anecdotal evidence" in academic discourse as a counterweight to data-driven or statistically based research. He presented the nucleus of this idea back in 2013 in his essay "Anecdotal Evidence," which was at that time truly inspirational for us, as it made us think about the anecdote as a productive concept. In this text, Cubitt argues for understanding "the anecdote as a viable and indeed vital form of evidence" (2013, 5). An anecdote is told as something true (which can be true, wrong, or doubted) and usually considered to be astonishing; something that moves us or that is exemplary of something. Unlike data-driven evidence, the "core of the anecdote is not its typicality but its specificity"; it is a "unique instance" (Cubitt 2013, 5). Moreover, Cubitt sees the anecdote as a laboratory, as a site not only of (anthropological) observation, but also for theorizing—an idea that is also important to Gallop, as we have seen.

Cubitt observes:

> Relevance, another term for "connection," ties anecdotes together. When a researcher has amassed enough anecdotes—read enough poetry, seen enough films, observed enough informants—connections always emerge, and each anecdote can be searched for its relevance to another. This is both how we form theories and how, drawing on counter-examples, we dispute them. (2013, 11)

While statistics tend to hide the exceptional, the anecdotal method brings the exceptional to the fore. In media communication terms, one could say it is a disturbance, a unique case that creates "noise," or a trace that becomes relevant. According to Cubitt, the anecdote is a form of failure, or rather a response to failure: "The exception is precisely the focus of the anecdotal method which seeks out the circumstance where an expected result fails" (2013, 9).

The TV bike, the TV calendar, and the TV table are all characterized by an improper use of found objects. At the same time, they are all unique and specific. As far as we know, these televisions have never been rebuilt or replayed; they remain singular events. This ties in with the specificity and uniqueness of the anecdote, as pointed out by Cubitt. But then the paper media devices, like telephones and laptops, seem to be a recurring phenomenon. Yet those too are all unique. Each of them has its own anecdote, its own situatedness. In Episode 2, we discussed the bunny paper phone and the beach phone created by the same girl but in different, specific situations. The recurrence of a specific DIY device in the child's play always comes with a variation, with a uniqueness attached to it.

Anecdotes, Historiography, and the Idea of Thoughtfulness

Whereas some would see the anecdote as a precarious model of history, not least when used as an allegory to "simplify," others discuss it as a medium of historical reflection, a historiographical tool. Even if not at the core of his project, Cubitt also alludes to the historiographical potential of the anecdote when he writes:

> All anecdotes are subjunctive. They express how what is possible, imagined, regretted, or wished for inhabits not only the future and the past but the non-identical present in its dialectic of actuality and potential. (2020, 21)

The potentiality addressed in this particular understanding of the anecdote's productivity chimes well with the media-archaeological perspective, discussed in the previous episode as the historical entanglement of past, present, and future.

For literary critic Joel Fineman, who wrote a much-cited essay on the anecdote, its historiographical potential is essential. Fineman sees the anecdote as a *historeme*, the "smallest minimal unit of the historiographic fact" (1989, 57). Such a view on the anecdote is shared by comparative literature scholar Paul Fleming, whose project on the anecdote is inspired by the works of two philosophers, Walter Benjamin and Hans Blumenberg. According to Fleming, Benjamin sees the anecdote as disruptive and as such having revolutionary potential, whereas for Blumenberg it has not. Fleming uses the notion of "emergency" in reference to Benjamin, and a "pause button on the tape recorder of everyday life" in reference to Blumenberg (Fleming 2020).

In his writings, Blumenberg combines narrative and discursive passages, comments and anecdotes; and it is not only the brevity of the anecdote that attracts him. The anecdote is in fact related to one of his key concepts: *Nachdenklichkeit* (or "thoughtfulness") (Blumenberg 1980). As philosopher Rüdiger Zill describes it, Blumenberg's *Nachdenklichkeit* refers not just to thinking or reflecting but to "something that throws obstacles in one's way, that makes one take detours" (Zill 2014, 40; our translation). And as such, Zill continues, "the anecdote can become a tool for exploring new ideas" (2014, 40; our translation).

Blumenberg's *Nachdenklichkeit* might be exemplified by the following anecdote, which invites us to look once more at a TV fabrication. It happened on the day a family was moving out of their house. While the adults were busy with the movers, the kids did not have much to do. When a parent called through the empty apartment asking her seven-year-old daughter what she was doing, the girl answered: "Watching television!" But the mother knew the movers had already packed the TV set. So, what

was happening? In the empty living room, the girl was playing a game with her friend. They were sitting on the floor staring at the empty wall, where the TV screen used to be. As they said, they were indeed watching television. Their TV screen—we might call it a "phantom TV"—was defined by its (former) position or fixed location in the house. At the same time, this anecdote also evokes the notion of the *dispositif* as a specific arrangement of bodies, gazes, and an (absent) screen.

Reinventing and Relocating Cinema

When thinking about television in the 21st century, one must consider its relationship to cinema and its own changing status. What for the adult generation was a rather specific domestic apparatus with its promises (like late afternoon or early evening children's programming) has been reconfigured and displaced. Today's children are growing up with 24/7 accessibility to social media entertainment platforms and "cinematic" content conglomerates, such as Netflix and Disney+. While media scholar William Uricchio described YouTube already in 2009 as an "experimental laboratory that may have its greatest relevance for the future of the medium currently known as television," a medium that is "experiencing its own crisis" (2009, 25), it is only in the last years that traditional television seems to be disappearing from contemporary childhood. In 2014, when the above anecdote took place, television was apparently still something promising for the two girls. But in order to better understand the potential of the phantom television that the two girls "watched," it might be helpful to look into some research on children's play in folklore studies.

In their research on children's play, Jackie Marsh and Julia C. Bishop (2013) ask what children mean by play. Interestingly, watching television is hardly ever mentioned as an activity of play. The television is only mentioned as a device to play videogames or to watch films. This relates to what Francesco Casetti has

called the "relocation of cinema," pointing out that "we can now watch films on various new devices" (2012, 6). Marsh and Bishop wonder to what extent adults' views, or the way children perceive them, could influence their answers about playing. Adults would, for instance, distinguish between, or even oppose, watching television (as bad) and playing (as good): "Stop watching television and play something instead," is a sentence often uttered by parents. If children are not mentioning TV as a playtime activity, it may be because they have internalized the parental distinction between playing and watching television, or they may not mention it for strategic reasons. But then to pretend to watch television is something else. The two girls were not just watching television but "played" watching television. Here we should remember Walter Benjamin's suggestion to shift the focus from "the toy as object (*Spielzeug*) to *playing* (*Spielen*) as an activity, a process in which, one might say, the toy functions as a medium" (Hansen 2004, 5; italics in original). But then there is no "toy" here, only imagination.

Another curious viewing setting was created by a three-year-old boy who arranged several chairs in a row, one behind the other, as if they were the carriages of a train.[8] As the child explained, he had built a cinema! To film scholars, this will immediately bring to mind the attraction of *Hale's Tours of the World*, launched in 1904 at the St. Louis World's Fair, which offered simulated railway journeys by projecting so-called phantom rides in film venues designed as train carriages. Yet in the boy's pretend play, the logic is the other way around: it is a transportation technology that is

8 An equally imaginative (and economical!) use of chairs we could evoke here was already discussed in the mid-1850s by Charles Baudelaire in his essay "Morale du joujou" ("The Philosophy of Toys"): "The eternal drama of the stagecoach played with chairs: the carriage as such (a chair), the horses (chairs), the passengers (chairs), where the only living actor is the postilion! The equipage remains motionless—yet with what burning speed it devours the imaginary leagues! What economy of means!" (Baudelaire 2018, 14). See also the anecdote recounted by Huizinga about the boy playing "trains" in Episode 2, footnote 11.

repurposed as a cinematic *dispositif.* For it is not so much about the cinema simulating a railway experience, but rather about the train becoming, or simply being, a movie theater. Again, the screen is absent, or only imagined; as the boy explained to his parents, each chair had its own screen, very similar to in-flight entertainment. Surprisingly, the boy had no experience of air travel at that time, so it is not clear from where he took his inspiration.

A final anecdote, related to travel and the reinvention/relocation of cinema, concerns a girl who, at the age of five, began to refer to the highway as "cinema." The reason behind this child(ish) logic was very simple: the highway was the place (or nonplace) where she was allowed to watch feature-length films on a portable DVD player with a dual screen. Even without the attraction of a film to watch, the highway became synonymous with cinema, standing for a long journey and, thus, a long film—as opposed to the more regularly consumed YouTube clips. Yet again, as in the previous examples, the screen does not need to be physically present for this viewing setting to be functional or operational in the child's imagination.

What Is the Location of Cinema's Relocation?

This episode has pointed to a broad variety of screens, from handmade paper screens to repurposed tables and fully operational imagined devices, to reflect on two key concepts for our research: the artifact and the anecdote. We argued that the reinvention of cinema and screens is constantly taking place in the concrete context of play, where artifacts and anecdotes are intrinsically tied together. We have also seen that around fifteen years ago television still meant a specific configuration of screen culture for children. Back then, television screens could also be surfaces for the representation of images without movement or sound, as both sound and movement would be produced in the imagination of the playing child. But what does that mean for the

"relocation of cinema," as theorized by Casetti? With the notion of relocation, Casetti generally refers to "the process by which the experience of a medium is reactivated and repurposed elsewhere than the place it was formed, with alternate devices and in new environments" (2015, 28). In relation to cinema, he specifies:

> No longer only in a darkened theater and tied to rolls of film stock running through a projector, but now available on public screens, at home, on my cellphone and computer, it is still ready, in these new environments and with these new devices, to offer screened moving images through which we get a sense of proximity to the real, an access to fantasy, and an investment in what is represented. (Casetti 2015, 28)

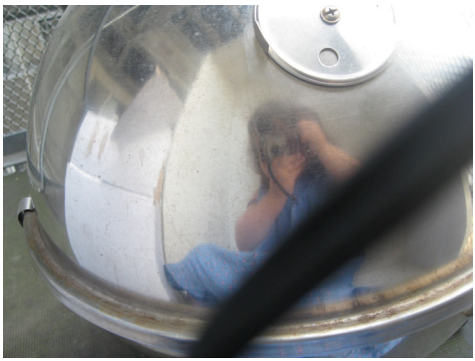
We would like to stress that such a description or definition of "relocation" only works from the perspective of today's adult generation. For the future generation of cinemagoers, the classical model of the movie theater is no longer the standard, but only one of the possible alternatives for watching films. One could say we are dealing with cinema's relocation in its reversal, as cinema's original location (the movie theater) has been relocated to, or replaced by, the home. Children are reinventing cinema in this new (re)location. Moreover, their media and film experience begins as a permanent mobility, as the screen in the hands of the child is a mobile screen and therefore constantly relocated. As discussed at the beginning of this episode, this also implies a relocation of media archaeology: from the public sphere to domesticity, from institutional history to family stories, from an abstract level to very concrete slice-of-life situations.

In this episode, we have focused on the relocation and reinvention of cinema as viewing situation or arrangement, by looking at different types of screens and by questioning what the screen stands for or what it promises or has to offer. In the next episode, we move to another dimension of the basic apparatus of cinema: the camera combined with the voice of the child.

E P I S O D E F O U R

It’s spring! Unbeknownst to her parents, a three-year-old girl makes a series of photographic selfies on the balcony of their apartment. She sits in front of a small portable BBQ, using its reflecting surface as a mirror in which to capture herself with a point-and-shoot camera. The spherical shape of the BBQ slightly distorts the image and the camera’s strap swings blurrily in front of the lens. The little girl holds the camera tight to her face and looks through the viewfinder, which results in a selfie of the camera, rather than of herself, with the lens as one big eye in the middle.

[Source: Private archive, 2011]



Drawing with a Camera

Among children, collecting is only one process of renewal; other processes are the painting of objects, the cutting out of figures, the application of decals—the whole range of childlike modes of acquisition, from touching things to giving them names.
Walter Benjamin ("Unpacking my Library," 1931)

The Era of "Selfie-Graphy"

In 2013, the term "selfie" was chosen as word of the year by Oxford Dictionaries. As an emergent media practice, it deserves to be studied through the lens of young children who, in those early years of the 21st century, playfully explored various modes of self-inscription or, as we propose to call it, "selfie-graphy." For instance, the three-year-old girl of the opening anecdote took a series of pictures of herself with a compact camera, using the metallic BBQ surface as a mirroring device. One could say that she was making selfies without using a front-facing or selfie camera of a mobile phone. On the one hand, the phenomenon of the selfie is indeed very much linked to the front-facing camera but, on the other hand, as these BBQ selfies show, it did not have to wait for this specific option to be available on our phones. As we will see in this episode, it is especially the selfie video that became very popular among the youngest generation, which is a deviation from the most common practice of the (adult) selfie as a photographic genre, as it was clearly defined in 2014 by the *Oxford*

English Dictionary when the term was added as a new entry: "A photographic self-portrait; *esp*. one taken with a smartphone or webcam and shared via social media."[1]

In our view, the notion of "photographic self-portrait" does not do justice to the practice of young children taking photographic and/or videographic selfies. Instead, we suggest putting their playful selfie-graphy in a larger context of inscription technologies and techniques. In *Sound Technology and the American Cinema*, James Lastra (2000) made a fundamental distinction between inscription and simulation, which he drew from two sound-system models developed in the nineteenth century. The simulation model is based on the emulation of the human sensorium and its various body parts, ranging from Alexander Graham Bell's use of a dead human's ear in his telephone system to the phenomenon of talking machines. The inscription model, in contrast, is associated with sound recording as a form of writing. Here the historical reference point is Thomas Alva Edison's phonograph, which literally means "sound writing." Edison's device recorded sound by engraving or impressing vibrations on a tinfoil sheet wrapped around a cylinder. That is, the device made the vibrations impress themselves on the sheet (Lastra 2000, 24–31). Photography and cinematography are to be considered writing systems along the same line, that is, as literal transcriptions of physical qualities of the world. Just as phonography is not an imitation of hearing but the "self-writing" of vibrating air, photography and cinematography are not emulations of the eye but recordings of light.

As we argue in this episode, we do not see the selfie as a specific image genre but rather as a media practice of (self-)inscription, akin to writing and drawing. It is about bodily techniques of inscription, such as recording facial expressions, vocal vibrations,

1 Since December 2023, the definition reads as follows: "A photograph that one has taken of oneself, *esp*. one taken with a smartphone or webcam and shared via social media" (*OED*, n.d.).

and full body movements, that are inscribed as (physical) traces. In other words, we are more concerned with the process of making what supposedly constitutes a selfie than with the final result of the self-image or self-portrait. Since it seems that children explore the selfie mostly as a moving image practice, instead of a media practice that shares a family resemblance (in a Wittgensteinian sense) with still photography, we suggest considering and studying it as a way of reinventing cinema.

Camera-Crayon

When Alexander Astruc introduced his famous notion of "camera-pen" (*caméra-stylo*) in 1948, he explicitly considered film as a form of writing; or, rather, he envisioned that the future of film was to "become a means of writing as flexible and as subtle as written language" (quoted in Odin 2012, 167). As observed by Roger Odin, a reference to Astruc's metaphor is almost obligatory when working on mobile phones as new (film) cameras (see also Marcheschi 2010). We would like to connect it back to the practice of drawing and some nineteenth-century art educational writings about children's drawings and sketches. As early as 1857, English art historian and polymath John Ruskin recommended letting young children draw "at [their] own free will." In fact, in the preface to *The Elements of Drawing*, he states upfront that his book is not intended for children under the age of twelve or fourteen, because at that young age they should only be involved in "the most voluntary practice of art" (Ruskin 1857, ix). And he continues:

> If [the child] has talent for drawing, it will be continually scrawling on what paper it can get; and should be allowed to scrawl at its own free will, due praise being given for every appearance of care, of truth, in its efforts. It should be allowed to amuse itself with cheap colours almost as soon as it has sense enough to wish for them. (Ruskin 1857, ix)

As a thought experiment, we suggest replacing drawing with filming, paper with screen, and cheap colors with cheap equipment. Letting children sketch with cameras instead of crayons "at [their] own free will" was, in the early years of the smartphone age and maybe even still today, a rather controversial suggestion. We (provocatively) embrace Ruskin's recommendation as a starting point for understanding how children are reinventing cinema with what we propose to call a "camera-crayon," which is a tool at hand in their homes, be it the digital photo camera, the mobile phone, the electronic tablet, or even a toy camera.

There is, for instance, the toy camera developed since 2008 by VTech, called Kidizoom. Apart from taking pictures and making videos, Kidizoom also offers some simple computer games to play and comes with headphones for listening to either recorded sounds or game sounds. Compared to compact cameras and mobile phones, this "child-friendly" camera is rather bulky, due to its durable plastic case and robust side handles.[2] Kidizoom has a lens on top that you can physically move and turn around, thus converting it from back-facing camera ("normal camera") to front-facing camera ("selfie camera"). We came across an experiment with this special camera feature in a video made by a six-year-old girl in the spring of 2015. The child switched the lens between the two positions during the filming process. First, we have a view of two armchairs, then we move to the other side of the camera to the filmmaker, whom we see very briefly upside down (before the lens is right in front of her).

2 Founded in Hong Kong at the end of the 1970s, VTech was known for its home computers. The company soon started to venture into electronic learning products (ELPs) and electronic toys, which reached a wide market. In 2015, when the company experienced a data breach, it affected nearly five million accounts belonging to parents, and more than six million profiles belonging to children were compromised, that is, photographs of children and adults, detailed chat logs between parents, and voice recordings were leaked by a hacker (Wikipedia 2024).

As a feature on mobile phones, the front-facing "selfie" camera was first introduced in 2003 with Sony Ericsson Z1010 and became standardized with the introduction of the iPhone4 in 2010. But children find ways to make photographic (or even videographic) selfies without a front-facing camera. You can either take a picture of yourself in front of a mirror or simply turn the lens of a compact camera towards your face and take a selfie. However, by turning the camera around, you can no longer look at its embedded LCD screen to control the framing and make sure you are actually capturing your image within the borders of the frame.

Here we should briefly reflect on the interface or default mode of the camera-crayon. This default mode can be described as that which makes a video possible but is not the video itself. Such a notion of default mode resonates with Swiss art historian Jacob Burckhardt's idea of format. In 1886 Burckhardt wrote: "The format is not the work of art, but a condition of its existence" (quoted and translated in Freyermuth 2015, 180). According to the art historian, the format "protects art from dissolving into endlessness" (Burckhardt 1918, 254; our translation).[3]

The default mode of the camera-crayon is the digital video format. It comes not only with an embedded screen or display that assists with controlling the borders of the frame, but is also by default in color and equipped with automatic sound recording. Children record, *nolens volens*, all background noise and off-screen conversations. Everything is captured by the nearly invisible and always-on microphone; all sounds, intentional and non-intentional, on-screen and off-screen, are inscribed in their little thumb films. Here we want to mention another Kidizoom video where the same girl is articulating vocal sounds in close-up, like "poo-pee-tee-kee," "lalalala," "moo-moo," "mee-maa-maa," etc. But then her selfie-graphy is interrupted by one of her younger

3 For an extended discussion of Burckhardt in the context of format studies, see Volmar, Jancovic, and Schneider 2020.

 sisters who is asking off-screen: "What are we going to do? What are we going to do?!"

In terms of image format or aspect ratio, there are usually two options for the camera-crayon: the horizontal/landscape mode versus the vertical/portrait one. While we have already discussed the issue of verticality in Episode 1, here we want to make the connection with drawing. If we think of the device's display or screen as a sheet of paper, we should remember that children "learn" how to draw within the borders of a sheet of paper, not only in terms of composition but also in order not to damage or soil the surface under the paper, be it a table, a book, or the floor. They "learn" how to stay within the "frame": as such, the frame of the paper, like the frame of the moving image, has a disciplining effect but, as we will see in this episode, children find ways to transgress these boundaries by using the camera-crayon in an "undisciplined" manner. It is no coincidence that reform pedagogue Bruno Munari, whose work we discussed in Episode 2, also experimented with the aspect ratio of drawing paper in his workshops. He would cut or tear paper sheets for children into various sizes and forms in order to make them explore with their drawing the restrictions (and possibilities) of conventional formats (Munari 1977, 123–27).

Finger Painting: From Paper to Screen

Yet another invention in art education can be traced back to Munari's Italy, where American artist and educator Ruth Faison Shaw, while running a school for English-speaking children in Rome, developed finger painting as an art educational method in the late 1920s and patented a safe nontoxic paint in 1931 (Shaw 1947; Townsend 2011). For our discussion of the camera-crayon, finger paint is of interest in several respects. First of all, it leaves literal traces of the finger on the drawing surface; moreover, it is a self-inscription without the use of an intermediate tool (except for the paint itself). Most importantly, it is a medium of touch.

This is also true for the camera-crayon, which perfectly fits in the small hands of the child and is nowadays by default equipped with a touchscreen. In this context, it is worthwhile mentioning that finger painting became part of touchscreen experiments conducted in the early 1990s at the Human–Computer Interaction Lab (HCIL), run by computer scientist Ben Shneiderman at the University of Maryland. They developed, for instance, the touch-painting program PlayPen II (aka PenPlay II) that allowed users to draw directly on the computer screen, by finger, using different types of brushes and colors—very similar to today's "coloring for kids" apps for electronic tablets (Strauven 2021, 181).

Indeed, with the emergence of electronic touch-based tablets, finger-painting apps became quite popular in the early 2010s. And just as finger painting on paper results in a physical imprint of the body, so the same goes for digital finger painting. In terms of self-inscription, however, this is not limited to (touching) the touch-screen. The BBQ pictures of this episode's opening example, for instance, are not just reflections but also imprints of the little girl, that is, inscriptions of her body traces captured by the camera. As seen in Episode 1, the fingers sometimes partially (or even fully) cover the camera lens and thus leave physical traces on the image. Bodily inscriptions, which will be discussed in more detail later in this episode, are key for our notion of camera-crayon, which is not limited to touch; children also produce vocal self-inscriptions when filming, making not only selfies but also "singies," as we propose calling their singing videos. Children may discover other sound recording techniques as well. In Episode 2, we discussed how a six-year-old girl "hacked" the Voice Memos app and turned it into a graphic video maker to record her vocal performances (ranging from singing and narrating to Futurist noisemaking) and how she looked attentively at the visual graphs of her voice, fascinated by the traces that her voice literally inscribed on the phone's screen.

Whereas the Voice Memos and finger-painting apps are great examples of cameraless recordings or inscriptions, this episode

will focus on the use of the camera as a new tool of drawing. But before we look into concrete examples of so-called camera drawings, we want to make a detour via two nineteenth-century aestheticians, who were among the very first thinkers who studied children's drawings for their inherent qualities and not as immature forms of adult practices.

Revisiting Rodolphe Töpffer and Corrado Ricci

Already in the 1830s, Swiss cartoonist Rodolphe Töpffer commented on the child practice of drawing in his essays on little doodle men (*petits bonshommes*), which are rapidly sketched rudimentary figures typical for comics and cartoons. Töpffer made a comparison between these little doodle men and human figures scribbled by children. According to the cartoonist, children draw their objects "not as a sign of itself envisaged as beautiful, but as a sign of an intention, of a caprice, or, to speak more accurately, of an elementary beauty that may be rough and crude indeed but which issues at last absolutely and exclusively from thought" (Töpffer 1858, 261; our translation). Töpffer distinguishes the human figures doodled by children from the little doodle men drawn with the intention of imitation. For, in their act of doodling, children are not driven by the intention of imitation but by the intention of thought, which is "infinitely more pronounced and successful" and even reveals "the real birth of art" (Töpffer 1858, 259; our translation)—art as free, creative conception (and not as imitative process). When looking at children's digital videos, we believe there is a similar "elementary beauty." Their "rough" or "crude" handling of the camera, which often results in shaky takes or blurred images, conveys the rawness of the emergent media practice, in this case the selfie or more generally the little thumb film. The stripes that the briskly moved camera leaves on the image can be seen as traces of the body's energy and compared to rapidly drawn lines on paper, resisting the disciplining effect of

the frame we mentioned above. In a way that is similar to drawing with a crayon outside the lines (or even outside the sheet of paper), the camera is often moved back and forth or rotated, as if the little filmmaker wants to get out of the frame and capture the off-screen.

Like Töpffer, we are especially interested in the untutored kid who is "free" in their media exploration and filming practice as play. Unlike Töpffer, however, we do not want to romanticize the "purity" of the unschooled child's creativity. Our understanding of children's creativity is neither Rousseauian nor does it correspond with the notion of creativity in creative industries (under digital capitalism). In our view, children's creativity is without rules, free and purposeless, but at the same time it is also connected to technology and the media ecology in which children are growing up. When picking up the notion of unschooled creativity, we are interested in the ways children do not go by the book even if they are imitating adults. For instance, they clearly mimic adults when using the smartphone to take pictures and make videos, but they also develop their own style and logic. Especially the youngest do not know about the issue of storage and data migration, so they are also in a certain sense format free.

To return to the study of children's drawings, Töpffer's "intention of thought" applies not only to the inscription of human figures but also to the depiction of surroundings, animals, and inanimate things—an idea that we also detect in their "free" or "creative" media productions. Here we would like to refer to Italian art historian Corrado Ricci who in 1887 published a wonderful little book entitled *L'Arte dei bambini* (Children's art), for which he collected over a thousand drawings made by elementary school children in Bologna.[4] Together with Töpffer, Ricci can be considered one of the earliest and most original thinkers regarding children's

4 Although the book illustrates only about 35 engravings of authentic pencil drawings, Ricci's findings are based on a much larger corpus that is

drawings (Leeds 1989). Despite the title of his book, Ricci claims that children are not driven by the desire to render their subjects artistically. They are less concerned with optical results than with the literal completeness of their subjects, which often results in mixed or combined perspectives: think of houses with three walls or faces in profile with two eyes. According to Ricci, so-called mistakes in children's drawings should not be considered from the viewpoint of representational realism (which would correspond to the adultism discussed in Episode 3) but from the logic of the child, which is based on the law of integrity. When drawing a man in a boat, children tend to draw him from head to foot, without taking into account that part of his body is hidden from sight by the side of the boat. They reason as follows: "The man in the boat is all there, and if he is whole, why should we draw only half of him?" (Ricci 1887, 12; quoted in Leeds 1989, 97). In other words, when drawing, children rely on memory more than on observation. This is also why, in Ricci's view, children's drawings are to be considered as "descriptions," as attempts to "describe" their subjects "with signs," as they would do with words (1887, 11).

Videographic Modes of Description and Acquisition

We have noticed that in several videos made by young children, there is a similar act of description going on. In their little thumb films, children often name the various objects they are trying to capture with the recording device. In other words, they describe with both signs and words the subject of their videos, which may be their room, a construction made with building blocks, or themselves. For instance, on a Sunday morning in 2014, a seven-year-old girl took possession of her mother's iPhone to film her room and all the objects in it, while listing them in voice-over, one

complemented by a small portion of little sculptures. The age of the children in his study ranged between six and ten.

by one. In Ricci's terms, we could say she is "describing" her room. Her little thumb film is a literal inventory of the material world around her ("this is my Barbie horse, and these are Mommy's glasses, and this is a bag, and this is the box"), which goes even beyond the borders of her room, outside the window ("and this is my school"). The same principle is at stake in a video made by a six-year-old girl who used a compact camera to go from description (or non-selfie) to self-description (or selfie). First, she describes the space of the living room around her and indicates—with words and moving images—a big toy snake on the floor. Then, she moves on to herself, to the selfie moment, which lasts about 30 seconds. She tilts the camera from foot to head, with her voice adding a description: "So are my feet, so are my knees, so is my belly and so am I." And the girl continues: "Have you seen me? So is my hand." Then she waves to the camera and turns the lens back to the rest of the room.

Although we believe that Ricci's notion of description helps us to read the little thumb films from the logic of the child, we also think that there is more at stake. For it is no longer just the hand drawing lines but the entire body inscribing itself and leaving traces. With the new portable recording devices, easy to hold in a child's hand, both photography and videography become practices of body inscription. This is even stronger when the child is filming while constantly moving (or dancing) around with a shaky camera, as is the case in most of the selfie videos made by young children. As maintained throughout this book, these videos are also traces of the child's play, or rather they are a form of play. As Walter Benjamin would call it, they are "processes of renewal," like other "childlike modes of acquisition," such as "the painting of objects, the cutting out of figures, the application of decals" (2005c, 487). But unlike these traditional processes of child bricolage, the videographic mode of description and/or acquisition adds the dimension of movement, both of the camera and of the child's body, and as such allows for the storage of a lived experience. The ability to "store experiences"

is an important aspect that Lastra pointed out in his discussion of nineteenth-century inscription technologies, such as photography, phonography, and cinematography. He asserted:

> While traditional forms of writing might be said to "store" only other written texts or, at best, abstractions of spoken language, the new media seemed to store *experiences*. In effect, these technologies seemed capable of offering new forms of perceptual experience that, while mediated, appeared to preserve the full phenomenality of an event. (Lastra 2000, 58; italics in original)

It is precisely this capacity to "preserve the full phenomenality of an event" that is at stake in many videos made by children, in particular in their selfie videos, which bring the little filmmakers literally into the picture, as a "phenomenal" part of the event.

Even if storing experiences is not the child's intention, the play of filming stores the "phenomenality" of filming as play, revealing that the selfie video is often about much more than just filming themselves. For instance, in February 2014, a six-year-old girl made an eighteen-second selfie video that became a self-reflexive/metafilmic song about filming, and also stored a moment of intimacy with her mother. The video starts with the girl looking down at her own (mirrored) image on the phone's display, which is lying flat or is held horizontally. Then, she starts to sing softly the following improvised song: "I am filming lalala, I am filming lalala, I am filming lalala. Lalalala… Filmilalilu…" During the filming, she slowly moves the camera away from herself, capturing or "describing" (in Ricci's term) the space around her: the wall with a flower poster, the window looking out on winter trees, the ceiling with a decorated paper shade. In between, there is a close (haptic) glimpse of the face of her mother who seems to be lying down and half asleep. But most notably the video is about the experience of making a film—an experience that is stored while making the film and that is quite self-reflexive, as the girl sings: "I am filming."

This video is storing a unique experience, which coincidentally is repeated in a very similar way by another girl, in another country, in December 2015. Here the girl is lying in bed next to her mother and holds the device horizontally when she sings in crescendo: "I am recording, I am recording, I am recording," and then continues with an improvised rhyming song. The video is less descriptive than the previous one, but equally intimate and self-reflexive in its storing of the filmmaking experience. This tension between uniqueness and repeated occurrences evokes what we discussed in Episode 3 regarding anecdotes, which are all unique and specific even if the phenomenon of DIY media devices is a recurrent phenomenon among children. But, as we have argued, each self-made device comes with its own situatedness. The same is true for the videos storing experiences, which remain singular events in terms of concrete situatedness.

The Question of Seriality

Besides the phenomenon of repeated occurrences, which does not undermine the uniqueness of the lived (and stored) experience, there is also the fact that children often produce series of images, be it photographic or videographic ones. They often repeat the same take, with a slight variation, as a remake of the first take. We can compare this, once more, with the practice of drawing, as children tend to draw, over and over, the same subject (a tadpole figure, family portrait, houses, trees, etc.).

Telling is the following anecdote of a little girl who developed three different motor skills at the same time. In the fall of 2015, at the age of seventeen months, she took her first steps, made her first color scribbling, and took her first digital photo. The mother told us that she had given her iPhone to the little girl in order to keep her busy while she herself was watching a video installation at an exhibition. The child, seated on the mother's lap, started manipulating the smartphone with delight and quickly discovered the camera function. Without any explanation, she understood

she had to press the round button on the screen display, and that is how she made her first picture. However, she kept her finger pressed on the icon and therefore made a series of (almost) identical images looking down, capturing her left foot (and part of her mother's left foot as well). So, her first photo was a "foot selfie," or rather a series of "foot selfies."

The same is true for the BBQ selfies at the beginning of this episode, which were produced as a series of three. Another example is the series of selfie videos made by a five-year-old boy, which we discussed in Episode 1. Some lasting only a couple of seconds, these videos show the boy looking at the screen and saying "Hello!" in a variety of ways. Or there is the story of a mother who during the early months of the COVID-19 lockdown discovered close to 50 selfies on her phone, taken unbeknownst by her seven-year-old daughter, while she was in a Zoom meeting. When she posted the story of this discovery with a screenshot on Facebook, another mother commented that she had "just deleted 164" of the same.

Children indulge in serial photography not only when taking selfies but also when taking pictures of others. And when you tell them to stop, they will be even more driven to take their little play further and to continue to press the button. On the one hand, one might claim that this is a form of repeated game typical of the playing child. Children often repeat games endlessly; it is within the sheer persistency of repetition that the promise of timeless time becomes palpable. So, one might argue that the photographic seriality resonates with the temporality of childhood as timeless time, for its essence lies more in its repetition than in its variation and progress (confirming Benjamin's argument about repetition being the soul of play, as we will discuss in Episode 5). On the other hand, by keeping their little fingers pressed on the icon of the camera button, children reinvent a practice of (self-)inscription that evokes the seriality of nineteenth-century chronophotography, a seriality that locates

itself in between photography (still image) and cinematography (moving image).

More generally speaking, we could say that the little thumb films oscillate between stillness and movement. Photos taken by young children often come in series that bear some protocinematic quality because of the inscription of time and movement between the single images. It is not the unique image that counts but the repetition, the series of images. Obviously, the little filmmakers do not stick to the opposition between still and moving image practices, but rather blur this distinction. This is as much the case for an excessive series of snapshots as for videos of motionless objects or still images of motion. There is, for instance, the static video recording of a tomato that a boy had grown on his own and after harvesting had wanted to "engrave" on video. Or there is the photographic technique a girl "invented" during nighttime in a big city, trying to literally draw with the camera by moving or rotating it very quickly when taking still images of the city lights. These examples are all somehow transgressing our supposedly clear distinction between a photo and a film, at least from an adult perspective.

For children the distinction is made differently or for different reasons. Here we might mention the logic developed by a five-year-old boy, who makes a clear distinction between the two functions of the iPhone's dual camera. He reserves the "normal" camera—that is, the rear camera—for taking still images; for filming, however, he uses the front-facing camera, which results in selfie videos, even if he is not always interested in filming himself. It simply seems that he connects the mirroring effect of the display with movement feedback. Thus, he uses the front-facing camera for creating moving images not only of himself but also of his surroundings. For instance, when walking through the hallway of his home, he holds the phone rather low and makes ceiling shots. The effect is often rather chaotic, or "experimental," which is of course due to the cumbersome action of making a non-selfie with the selfie camera. We can only try to appreciate

the effect of this kind of filming if we surrender ourselves to the "illogical," yet very consistent, style developed by the little boy. Furthermore, the boy often accompanies the moving images with the movement of his vocal cords, humming or singing along, which gives some rhythm to his (non-selfie) selfie videos.

The Singie

We have noticed that many children tend to sing along to the (self-)images they are filming or drawing with the camera. Kids might describe with singing words their act of filming ("I am filming lalala") or the things they are filming ("So are my feet, so are my knees"). Or they might engage in some random la-la-la or even get inspired by existing songs or pop genres (such as rap). Or they might give rhythm to their videos by softly humming, as the boy above does in his non-selfie selfie videos. It also happens in a short video of a low-tech gadget made by a six-year-old girl. The gadget, which she obtained free with a children's magazine, resembled some kind of electronic optical toy, each of its buttons combining a minimal light show with an equally minimal melody. It remains rather opaque in terms of operability. Nonetheless, the girl found a way to turn it into something playful: by placing it on top of a closed laptop and filming it from above with a slightly shaky camera, she makes the toy move, as it were, without physically touching it. While filming, she hums along, which somehow reinforces the illusion of the movement or "animation" of the toy.

In general, the soundtracks (or sound files) of little thumb films are not postproduced, as they are recorded automatically together with the image files—according to the default setting of the camera-crayon discussed above. The voice of the maker is added to the moving images simply as raw material. In the singing videos—or singies—children are using their voice as a form of musical accompaniment. As such, the soundtrack becomes an essential dimension in their filming practice. This is particularly

the case in singies where the song is at the center of the creative act. For instance, a six-year-old child improvised a rap song while she was making a video of one of her stuffed animals, a little wolf, called Nora. Filming the toy from above with a shaky camera, she sings as a true rapper: "Nora, she is mega nice, mega mega, mega nice . . . On the phone of mommy, mega, mega nice, mega, mega nice." A second example, made by another girl, at the age of five, is inspired by and based on the lyrics of a popular age-old Italian song, entitled "Girotondo." The song is a playground singing game, similar to "Ring a Ring o' Roses." It consists of dancing in a circle while holding hands and falling down on the ground at the end of the song:

Giro giro tondo *(Turn, turn around)*
Casca il mondo *(The world is falling down)*
Casca la terra *(The earth is falling down)*
Tutti giù per terra! *(Everybody's sitting down!)*

In her filmed version of the song, the girl is literally dancing with the camera. She adapts the original lyrics for her own purpose, referring, for instance, to the act of filmmaking and to her grandmother who appears in the film, taken from a typical low-angle child perspective. The song goes as follows:

Gira, gira *(Turn, turn)*
Il casco del mondo *(The helmet[5] of the world)*
Casca tutto, tutti *(Everything, everyone, is falling down)*
Nel filmino *(In the little film)*
Gira le rose *(Turn the roses)*
Gira la nonna *(Turn the grandmother)*
Gina è una bella nonna *(Gina is a beautiful grandmother)*
Guarda un po' *(Take a look)*
E là e là *(There and there)*

5 Here, the girl creates an Italian wordplay based on the similarity (or confusion) between the noun *casco* ("helmet") and the verb *cascare* ("to fall").

In Episode 3, we briefly looked into the research on children's play in folklore studies. In the field of children's folklore, or *childlore* as it is also sometimes called (Opie 1959; Marsh 2008), playground singing games as objects of study have a long tradition. In today's digital age, children are still playing (and singing!) playground games, an experience that is reflected in their individually created films or other "media texts." In an article on playground games and rhymes in the new media age, Jackie Marsh writes about this mixing of practices:

> Many children in developed societies are consumers and producers, from a very young age, of a range of media texts that involve a variety of playful and creative practices. . . . The "mediascapes" (Appadurai, 1996) of contemporary digital cultures seep into all aspects of children's lives, including playground activities. (Marsh 2012, 509)

One could say that the two singies described above are not just mixing existing media practices but are actually hacking them: the girls are hacking into pop culture (rap) and folklore (nursery rhymes) by repurposing songs and adapting them for their own purpose, that is, no longer a street music genre or a traditional playground game, but a soundtrack for their intimate filming.

Another example is the mixed song filmed by a boy as a variation (or free interpretation) of the Brazilian song "Ai se eu te pego!" ("Oh, if I catch you," popularized in 2011 by Michel Teló). The boy is sitting in a wingback chair, looking down at the screen of the phone. With his left hand he makes some gestures, drumming his head, to the rhythm of the song ("Ai ai"), the lyrics of which he clearly does not understand. Then he moves his head a bit ("Delicia delicia"), lowering his voice when he is hesitant about the text, then increasing the volume again and speeding up the tempo ("Oi oi… Ai ai…") before bringing the song to an abrupt ending ("Chack"). But he doesn't stop filming: the singing evolves into a kind of soccer slogan ("They are the best champions I have ever seen"), a song about Mario (from the Nintendo game?) and

other improvised characters, which the boy accompanies with funny faces, and then a couple of reprimanding lines ("You are a bit naughty! So, you should not do it again!"). At the very end, the boy brings partially into view the face of his father, who has apparently been watching in the background. The father even becomes an accomplice (or "means at hand," as we have suggested in Episode 2), as he sticks his tongue out at the camera.

Most often, the singing is not recognizable as a proper (existing or improvised) song, that is, with a clear melody and lyrics, but rather develops as a nonverbal improvisation, like the "lalala" of the self-reflexive/metafilmic one. Another singie, made in the early 2020s by a seven-year-old girl, combines the descriptive dimension with a variation of lees and las ("lalalala," "leelaleelala," "leelaalaalaa") sung in crescendo. This video is taken with an iPhone held in an upright position. The girl is probably sitting on a mattress on the floor, as her position remains fixed, like a tripod, on which the camera is panning left and right. From above, in a high-angle shot, she captures a Playmobil village she has arranged on the floor and decorated with its colorful string lights that are flashing. Halfway through the video, she pans the camera very quickly, back and forth, turning the image into a blur, as if she wants to get out of the disciplining frame, but then the movement slows down and the lees and las become more elongated like long musical notes. We could call this a *nonverbal* singie, as there are no real lyrics or words sung, which is a quite common practice among young filmmakers. It is a very simple way of drawing with your voice, of adding some vocal inscription to the moving images you are capturing with the camera-crayon. In the following section we will see how you can also draw with hand gestures while lip-syncing to a music track.

App-Based Cinema

So far we have not looked into the rise of social media platforms at the beginning of the 21st century. Indeed, most of the little

thumb films discussed in this book are not made on (or circulated through) online platforms like SnapChat, Twitter, Instagram, TikTok, Facebook, YouTube, or the no longer existing Vine platform. On the one hand, the legal age for creating an account for those social media is thirteen years, which is beyond the age group of our research. On the other, many children do make use of these services via an app on a mobile phone before turning thirteen, by "borrowing" the devices of siblings, parents, or older friends, and making app-based little thumb films, without however posting them online.

Considering the importance of singing in children's videographic activities, it comes as no surprise that there was one app in particular that became a success among them, especially among girls: Musical.ly (http://musical.ly), launched in late 2014. Musical.ly is the early and lesser-known version of TikTok, with which it merged in 2018. Today, the app is slowly being forgotten, not because the service was abandoned, as in the case of Vine, but rather because its name and history were overwritten by TikTok, which "has rapidly become one of the most influential video-sharing platforms in the world, reaching one billion unique users in 2021 while steadily surpassing social media giants" (Divon 2022, 88). At the end of 2017, Musical.ly had over 200 million registered users, 70% female and 50% under the age of 21 years (Robehmed 2017).

Initially, Musical.ly allowed users to create fifteen-second videos on sound bites from the app's library. The library contained sound bites of fifteen seconds or longer that could be cut down. Different from other apps, Musical.ly would only work with an internet connection, as the use of the sound-bites library required it. The video could either be stored on one's device or posted online on the platform. When posted online, a brand watermark was automatically added in the lower right edge of the video, below a watermark of the account name (yet another form

of—involuntary—self-inscription).[6] Moreover, the video would be saved to be shown in an endless loop. During its short existence between 2014 and 2018, the maximum length of the video was extended to 60 seconds.

In its early years, the Musical.ly app was mostly used for making lip-sync music videos, by selecting a sound bite and adding a self-made visual track that you could record at different speeds (fast, slow-motion, time-lapse) and with different (SnapChat-like) filters or (Instagram-like) effects.[7] A typical Musical.ly of those days showed someone performing a short dance to a sound bite with the corresponding mouth movements lip-syncing the track. The "signature" performance, however, required yet something else: the inscription (or drawing) of hand gestures. Communication scholar Jill Walker Rettberg (2017) has pointed out that the platform-bound app triggered, in a short time, a catalogue of codified gestures that the Musical.ly users, also called "musers," used globally. According to Rettberg, these hand signs constituted a codified language of nonverbal pictograms, equivalent to the emojis in textual communication. As such, they can be read as a recent development in a long history of formalized gestures in sign languages. But what was so peculiar about the Musical.ly hand signs is that they were often performed with just one hand and therefore consisted of only half a whole sign. As pointed out by Rettberg, this was because the camera was held in the other hand. Or, to put it differently, the reason for the one-hand gestures was to be found in the basic apparatus, more specifically, the use of the selfie camera. Especially at the very beginning, the Musical.ly videos were usually shot with the front-facing camera of the mobile phone, with the body and hand functioning as a kind of tripod (as discussed in Episode 1). But even when the video

6 After merging with TikTok, the watermark inscription remained as signature but changed to TikTok's logo and brand name.

7 SnapChat was launched in 2011 and introduced filters in 2015. Instagram, on the other hand, had already been released in 2010 and effects became available in 2011.

was not made by a single person, the same half one-handed signs were often used in the early times of Musical.ly. Among the musers with access to the internet, the gesture knowledge was circulated via video tutorials.

The success of Musical.ly gave rise to a new format, here understood, in Jonathan Sterne's words, as that "what specifies the protocols by which a medium will operate" (2012, 8). The "app ecosystem"—to use a term suggested by Ben Goldsmith (2014)—is based on an economy of proprietary formats.[8] Although new formats are launched every day, only very few become as successful as the videographic format of Musical.ly/TikTok. The format took inspiration from the genre of the music video (as popularized via MTV), which it used as its basic template. Basically, Musical.ly was a simple tool to turn yourself into a professional singer (without singing!). The musers immediately started to share their tricks for creating special effects, such as the use of basic stop-motion effects, by pausing the recording and changing location or people in front of the camera. In other words, we could say that they started to explore the cinematic potential of the format. The default mode of Musical.ly was vertical, but one could experiment in horizontal mode (which was turned into a format on TikTok with the so-called "stich," "duet" and "green-screen duet mode," all initially designed for split-screen formations).

The Musical.ly videos we came across in our research are quite basic and with no extra tricks. The examples take us back to the mid-2010s. A nine-year-old girl got to know the app via her older cousins and immediately started making her own music videos. For her first Musical.ly explorations she used the same track from the app's library over and over, according to the rule of repetition discussed above. She simply filmed herself in different locations: in her room, the hallway, the kitchen, friends' homes, etc. The

8 For further discussion of the app economy and how to research it, see Gerlitz et al. (2019) and Helmond and Van der Vlist (2021).

main challenge seems to have been to be in control of the different roles, as the girl did most of these clips on her own, as a one-woman show, so to speak. She was the singer (lip-syncing), performer (one-hand gesturing in front of the camera), and camera operator (manipulating the recording button). The videos also witness her struggle as a nonnative English speaker to understand, memorize, and pronounce the (English) lyrics. While experimenting with different camera positions and gestures, she made several vertically framed clips on the sound bite of "7 Years," an English song by Danish singer Lukas Graham released in 2015. The girl also made at least one clip lip-syncing "7 Years" without holding the camera in her hand, by placing it somewhere in front of her, on some piece of furniture or tripod of sorts, and by filming herself at a certain distance in a full shot, from head to toe, making gestures with both hands. This video is shortened by the fact that she had to run over to the camera to turn it on and off, so the music video performance lasts only ten seconds.

Musical.ly's library of sound bites included not only song fragments but also lines from popular movies. This allowed young children to inscribe themselves visually, with their body (and the help of Musical.ly), into popular film culture, saying lines—without actually saying them—and thus "acting" in their own little thumb films. For instance, a young girl used a line from Disney's *Monster University* (2013) recited by the green one-eyed round monster Mike Wazowski (voiced by Billy Crystal): "I found a nickel. I wish I had pockets." As with the above pop song, there is a discrepancy between the visual inscription and the borrowed vocal presence, as the track is performed by a male voice. What matters is pretending you are the (animated) character of a movie.

Apart from using the app as a generator for making your own music videos or mini movies, children sometimes transgressed Musical.ly's format by not making straightforward lip-sync videos. For instance, a ten-year-old filmed a sizzling pie through the glass door of an oven and turned it via the app into a dancing

and singing "humanoid" pie, thereby cheerfully undermining the intention of the app. This shows again the creativity or Töpffer's "intention of thought" at work in the child's play, similar to the hacking of the Voice Memos app and other instances of "improper" use discussed in this book.

Like many little thumb films, Musical.lys by young girls were often made in solitude, as an individual playtime and single-crew filmmaking experience. Yet the app was also frequently used by children playing in a group, which enabled separating the roles of performer and cameraperson. The cameraperson would then become a kind of "director" of the project, telling the ones in front of the camera what and how to perform. But the role power could also be reversed, with the performer dictating to the cameraperson how to film, especially when the former is older than the latter. For instance, in the fall of 2017, six girls of different ages engaged in a collective play of making Musical.lys, and it was the three older ones who were in charge while performing, using double hand gestures, in front of the camera operated by one of the younger girls. The cameraperson had two "passive" assistants at her side, both focusing their attention on the screen (and the film being made). It is interesting to observe how the phone, in this case held horizontally, creates a physical separation (or distance) between the two groups of girls. And because of the distance, the hand gestures gain importance over the lip-syncing. In terms of drawing, we could say that the hand gestures are bolder scribbles while the movement of the lips are more finely drawn.

From Singies to Soundies: Back to the Past?

To what extent lip-syncing is to be considered a catalyst for transforming the mobile phone into the key audiovisual toy for the children of the 21st century remains to be studied more closely. But we must remember that this trend did not start with Musical.ly. Some attribute the first social media lip-sync hit to an early YouTuber, a teenage girl named Tasha from Israel, who in 2005

uploaded a lip-sync video “Hey” using the eponymous 1989 song by The Pixies (Burgess and Green 2009). Furthermore, it is likely that lip-syncing had already become popular in the 1960s due to the success of the Scopitone visual jukebox, which was a precursor of music video channels, with performed songs on 16mm film (Orillard 2018).

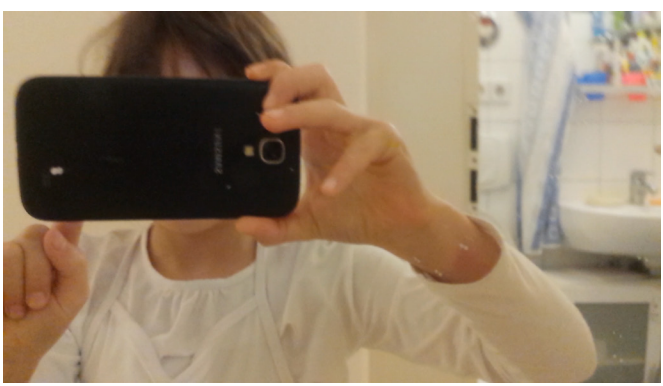
While the Scopitone visual jukebox was launched in 1960 in France, the genealogy of American “soundies” can be traced back to the 1940s (Delson 2021). These were three-minute musical films watched in public places on coin-operated viewing machines, the Panoram “movie” jukeboxes. These obsolete sound technologies and apparatuses, often considered the precursors of MTV, are of film historical interest because of the use of film stock. The “soundies” were filmed on 35mm, but then printed on 16mm and displayed with rear projection.

In terms of sound recording, we could argue that the Musical.lys are the exception to the rule: unlike the other little thumb films, no (ambient) sound is recorded while the camera-crayon makes a visual inscription of the little filmmaker. The singies, on the other hand, are all about the vocal inscription, like sound-on-film (or rather sound-on-file). In the next episode, we come back to the notion of the film format, as we travel back in time to the (possible/multiple) origins of the home movie.

E P I S O D E F I V E

On the day of her sixth birthday, a girl makes a film in the kitchen and welcomes her imaginative audience with a “Hello” off-screen. In the background, the father is talking to his other daughter, who is sitting at the kitchen table doing her math homework. The young filmmaker resumes: “Today is my birthday. My sister is doing her homework.” As a woman walks into the kitchen, the girl says: “This is my mommy.” She pans the camera to the left and adds: “And here is my daddy.” Then she walks to the hallway announcing: “I am gonna look for my brother.” When going through the door between the kitchen and the hallway, the camera captures something interesting: “Here is a crack, it looks strange.” Further down the hallway, she opens a door: “Here is the bathroom, my brother is taking a bath… in the bathtub with his LEGO.” The brother is clearly not pleased by the filming of his sister and asks her to stop. She pans away to a mirror on the other side of the bathroom. For the first time we see the little filmmaker as a mirrored image, although her face is almost entirely hidden by the smartphone she is holding. The girl says: “And here I am. My name is Kim. Bye, bye!” Length: 67’’.

[Source: Private archive, 2015]



And Making (Home) Movies

What is lost in the withering of semblance and the decay of the aura in works of art is matched by a huge gain in the scope for play. This space for play is widest in film.
Walter Benjamin ("The Work of Art in the Age of Its Technological Reproducibility," 1936)

A Hundred Years of "Home Movies"

In 2023, the two most successful small-gauge formats turned 100 years: the 9.5mm Pathé Baby format, invented by the French Company Pathé, and the 16mm format, an Eastman Kodak creation from the eponymous US company (Wasson 2021). Although "manufacturers launched more than two dozen portable projectors designed specifically for the home and other small group uses between 1896 and 1923 alone," as Ben Singer reminds us, only 9.5mm and 16mm proved to be sustainable (1998, 37). Both 9.5mm and 16mm can be considered *the* catalysts for the nontheatrical and/or amateur use of moving image technologies and practices. With these film formats, the moving image was transported into the realm of the private (privileged) home, where especially fathers started to extend the visual repertoire of family chronicles beyond still photography. What was soon called a "home movie," had become possible with a comparatively small and portable format.

In this last episode, we revisit the notion of home movies by placing the little thumb films made by young children within the framework of the "home mode of visual communication" (Chalfen 1976). A pioneering researcher in the field of vernacular visual culture, Richard Chalfen suggested that family albums, snapshots, and home movies constitute the "home mode of visual communication" to be studied as representing personal and group identities. To a certain extent, Chalfen follows in the footsteps of Pierre Bourdieu, who had already understood amateur photography as a technological compensation of the historically lost unity of the family in his famous *Un art moyen: Essai sur les usages sociaux de la photographie* (1965; translated in 1990 as *Photography: A Middle-Brow Art*). Media use and fabrications are, in this view, always "functional" or at least symbolic of the social and as such remain a "pretext" of their respective social use. In film studies, Roger Odin's semiopragmatic approach is particularly productive for our reading of children's little thumb films or *films-poucettes* within the tradition of home movies. As one of the first scholars of home movies, Odin (1979) argued that home movies work for their intended audience not *despite* all their flaws and filmic mistakes but *because* of them. However, home movies often present themselves as movies. For instance, they use title cards or entrances to mark the beginning of the film (Schneider 2004).

To discuss little thumb films as home movies might seem too obvious, as they are made by (little) amateurs for private purposes. At the same time, and with good reason, one could also argue that there is not much in common between the short digital videos made by young children at the beginning of the 21st century and the analog home movies traditionally made by fathers in the previous century. We therefore engage with continuities and discontinuities between the two practices. To this end, we look at videos filmed by little girls but also at those resulting from a collective practice, either by a pair of siblings or by a group of friends. As we will see, of key interest in these

collective films is the complex process of negotiation of what it means to make movies and to "play cinema" in a more general sense, as opposed to the (individually made, patriarchal) home movies, which were usually intended to document "important" moments of family life.

His-Stories

Home movies are generally understood as films made with family members for family members, that is, with the family as primary audience in mind. As such, the home movie tends to come with a familial bias. And, as already said, it was most often the father who was operating the camera (and therefore there is a kind of patriarchal bias to it too). But when did the history of amateur film "his-stories" start?[1] "It would be nice [to claim] that cinema history began with the home movie," Belgian filmmaker and film historian Eric de Kuyper once wrote in relation to the films of the Lumière brothers (1995, 11). The Lumière brothers chose characters and subjects from their own family life as motifs for their first tryout of the Cinématographe Lumière; the result has been enshrined in film history as *Le Repas de bébé* (*Feeding the Baby*, 1895), a 40-second film of a toddler being fed on a garden terrace. Often mistaken for a boy, the toddler in question is Andrée, the only daughter of Auguste and Marguerite Lumière, who both sit with her at the table. Despite the display of family members, De Kuyper is not the only film historian who hesitates to consider this and other early Lumière films as home movies. Although the Lumière films use home movie motifs, they are clearly addressing a wider audience. They serve to advertise

1 The term "history" comes from the Greek "historia" and has nothing to do with gender in its origins, but we suggest using the hyphen to distinguish "his-story" as male-oriented narrative from "her-story" as a feminist term to draw attention to the stories told and videos made by little girls of the 21st century. The notion "herstory" has been used from the 1970s onwards by feminist writers, historians, and activists in order to problematize male biases in writing histories and storytelling (*OED*, n.d.).

the camera/projector—the "hardware." They use established topoi of family, like the family sitting at the table, to show how the hardware works. Thus, the early Lumière films are not home movies stricto sensu but show reels for the sale of photographic equipment.

Furthermore, there is still a debate among film scholars regarding the main attraction in a "home movie" like *Le Repas de bébé*: Was it the baby or the motion of the leaves in the background that impressed the early film spectator the most? If it was the child, *Le Repas de bébé* provides a nodal point in the genealogy of cinema as a bourgeois institution that fits in the tradition of the home movie. If it was the leaves, the film is a demonstration of the lyrical potential of a new art, a new medium that can transform and renew everyday perception, which would mean that *Le Repas de bébé* is not a home movie in any sense.

Let us briefly have a closer look into the bourgeois genealogy of cinema. Apart from footage of weddings and honeymoons, home movie collections almost invariably include multiple takes of small children, newborns, and toddlers. In small-gauge home movies from the early 1920s and 1930s onward, the little ones first get presented to the camera (back then most often operated by the proud father) and then on screen to the rest of the family and close friends (Schneider 2004). In many families, children are even the main reason to purchase a camera. Italo Calvino (1983) once described the passion for taking pictures as an intrinsic result of fatherhood. Similarly, Susan Sontag argues that private photography responds to an implicit moral imperative: "Not to take pictures of one's children, particularly when they are small, is a sign of parental indifference, just as not turning up for one's graduation picture is a gesture of adolescent rebellion" (1990, 8).

Taking pictures as an intrinsic result of parenthood, and in particular fatherhood, is a media-archaeological topos that resonates with the mythical beginning of cell phone photography: it began with a picture of a newborn baby girl taken on June 11,

1997, by Philippe Kahn, the "inventor" of the cell phone camera. Referring to Laurence Allard's *Mythologie du portable* (Mythology of the cell phone), Odin tells the "his-story" as follows:

> It is 19[9]7. Computer scientist Philippe Kahn is supporting his wife in childbirth. As usual, he has a small camera and his phone with him and he thinks that he would really like to be able to send his friends and family a picture of the baby. As his wife's labor continues, Kahn starts working on his devices. In the time it takes to fetch his soldering iron, his daughter is born and he is ready to use the machine he has cobbled together to take a photo on his cell and send it out by email. (2016, 50)

Technically speaking, Kahn did not take the picture with a cell phone, but with a digital camera that was hooked up to a cameraless phone, a Motorola StarTAC flip phone. The phone was connected to a laptop, so that the picture could immediately be uploaded to a webserver that friends and family could log on to after receiving an email alert (Strauven 2024). This bricolage anticipates by a few years the introduction of the first camera phone in Japan in 2000 and then in the US and Europe in 2002.

Kahn's impulse to send a picture of his newborn daughter Sophie via a phone-*cum*-laptop to 2,000 email accounts is only partly connected to the compulsion to take pictures in relation to fatherhood as Calvino described it. The computer scientist's drive might rather be compared with the Lumière brothers' promotion of the Cinématographe, because in the end it was all about his engineering accomplishments. Yet in both cases the father is recording the daughter. It is this "passive" role that connects Andrée Lumière and Sophie Kahn, who both made history thanks to their appearance as "actresses" on screens, from the early film screen to the late 1990s PC monitor.

But what happens if the child is not in front of but behind the camera, as in the case of the first-person birthday home video described at the beginning of this episode? As a video that presents the family, her *film-poucette* or "her-story" is reminiscent of some of the very first films in history, like the Lumière brothers' short films showing elements of family life. The little video consists of a single shot, representing the point of view of the small filmmaker: it is a kind of travelogue, horizontally framed, through the apartment she lives in. The video starts at the kitchen table where the girl welcomes her imaginative audience. In the background we see and hear the father talking to his other daughter, who is sitting at the other side of the table doing her homework. Off-screen we hear the little filmmaker's voice commenting on the scene she is filming. Several things are striking about this short video. First of all, it has a clear structure with a beginning and an end. While many home movies have a beginning, indicated by an entrance or some kind of opening gesture, they rarely have a distinctly marked ending (Schneider 2003). The girl's birthday video also transcends the home movie in terms of its implied audience. As Odin (1995) argues, the home movie is institutionally (as a genre, if you will) structured by the fact that it addresses the same group of people that are to be seen on the screen: as already mentioned, the home movie is made with family members for family members. The video of the young girl is not addressed to the members of her own family, but rather to an audience beyond the close family circle. It is to this audience, who are not familiar with the characters of the film, that the little filmmaker introduces the various members of her family—"mommy," "daddy," "brother."

Like many home movies, the video is shot on a festive occasion. Yet it is not about the birthday cake, the blowing-out of candles, and the presents. Instead, it catches impressions of everyday family life. The girl introduces the viewer to her family in a

homely setting. Then, there is the crack between the kitchen and the hallway door, a little disturbance and detour, the crack that "looks strange." In a particularly clever turn, the filmmaker "signs" her film by concluding it with an image of herself holding the smartphone in front of a mirror. While the filming device (or basic apparatus) covers her face, she identifies herself by name on the soundtrack.[2] Signing your film is not a standard trope of the home movie; one could therefore argue that this little "home video" also undermines the conventions of, or even reinvents, the home movie as genre. Further, one might ask whether the video shares certain characteristics with other "home videos" made by other children or whether it is a unique and singular expression. Compared to similar examples, we argue that it is both: it shares certain traits with other children's home videos but at the same time it is a singular videographic utterance of this particular girl.

In general, we have observed that very few little thumb films show or introduce family members. Sometimes parents or grandparents appear, accidentally or unintentionally, in the background; sometimes we hear their voices on the soundtrack, but they remain off-screen as they are not the protagonists of the child's little thumb film. An exception to the rule is the following video made by a six-year-old girl offering a humorous take on a Sunday afternoon family routine or, rather hassle, as the family is trying to leave the house for a walk. This video is shot with a smartphone in upright position. In the background, we see the mother telling her son to put on his shoes, while the filmmaking sister comments off-screen: "And here he goes, he puts on his shoes… Daddy is putting them on as well… Mommy is standing there, bossing everybody around." Then the little filmmaker continues in a singing voice: "Dum tadi tadim tadam dim tada. And here is my pancake." At this point the camera is panned to the foreground of the not-yet-cleaned-up lunch at the dining

2 The name used in the opening anecdote is not the real name of the girl. For privacy reasons, we used a pseudonym.

table where a pancake comes into the picture. Again, this is a video with a clear beginning and end that shows and names the family members, although without explicitly pointing them out to an implied external audience as in the birthday film. The girl describes the actions of the family members instead of introducing them deictically ("This is my mother," etc.). The end is marked by a comic relief: a short song and a distraction away from all the hassle thanks to the pancake.

The Orphaned Film and the Question of the Audience

Within the field of film studies, the negligence of research on children's films has to be understood in relation to its disciplinary tradition that is historically rooted in literature studies and art history and that, for a long time, has taken a rather ambivalent position towards objects produced in the context of ephemeral, utility, amateur, or nontheatrical filmmaking. Yet, in the last two decades, there has been a growing sensibility and interest in those "marginal" film practices and objects, for instance, industrial films, educational films, and home movies (with a strong focus on predigital ones) (Hediger and Vonderau 2009; Acland and Wasson 2011; Comand and Mariani 2019; Hediger, Hoof, and Zimmerman 2023). Further, social media have become—among many other things—incubators for the proliferation of amateur media practices, triggering an increased scholarly interest (Tepperman 2020; Salazkina and Fibla-Gutiérrez 2021). But even if research on those so-called marginal objects within film studies has helped to sharpen and differentiate our understanding of the significance of moving images in past and contemporary societies, digital home movies and especially those made by children have not so far garnered much academic interest.

One might say that the home movies made by today's children are "orphaned" because they are generally neglected by film scholars. They are academic orphans: abandoned, left aside, not

seriously taken into consideration. But they are also orphaned films destined for oblivion in more general terms.[3] Often the *film-poucette* is found by pure coincidence by the child's parents—during the transfer of a full memory card to a computer, a backup of a smartphone or, more recently, by simply scrolling through the photo app. If not deleted immediately, as is often the case, most of them are soon erased from memory, because considered trivial, badly made, or insignificant beyond the framework in which they were made, that is, beyond everyday child's play. But notably the films are also abandoned by the young filmmakers themselves. In other words, we call them "orphaned films" not only because they are not considered worthwhile to preserve and therefore easily forgotten, but also because they are not claimed by their very own makers.

The simple fact that children rarely watch their own little thumb films amounts to cleverly overruling (early) digital camera's recording process. Especially the first-generation smartphones cameras largely relied on algorithms that "clean[ed] the picture from the noise," or rather that "define[d] the picture from within the noise," by scanning previously taken pictures stored on the phone and trying to match faces and shapes (Steyerl, n.d.). Only very little of what hit the tiny single lens of the early smartphone camera ended up in the recorded file. However, still today, the young filmmakers seem less interested in the recorded file than in the recording itself. They engage in real time with what they see on the embedded screen while they are filming. In other words, they somehow mess up the "logic" of the digital recording process, because they still "need" 100% of what hits the lens for their playful filming experience before the actual recording is

3 As already explained in our Prologue, the notion of "orphaned film" gives a little twist to the more commonly used term "orphan film," which is described by the organizers of the biannual Orphan Film Symposium as follows: "Narrowly defined, it's a motion picture abandoned by its owner or caretaker. More generally, the term refers to all manner of films outside of the commercial mainstream" (*Orphan Film Symposium*, n.d.).

taking place, that is, before the filmed data is transferred to a digital file. This is a very subtle way of playing with digital media's temporality.

But then the "never-to-be-looked-at-ness" of the recorded/saved video files could also be a hint that this is less a documentation through images than a kind of archival practice related to the mundane practice of children collecting things (and, as such, storing experiences in material objects). Like little thumb films, found stones, sticks, leaves, etc., are often kept without being reused. Yet, like the films, these collected objects are not supposed to be thrown away. If little thumb films are rarely (re)watched, shown or shared, one could suppose that the quality of a filmed scene is not conceived from the perspective of a future audience, as there is often no audience at all. But then again, this is not entirely true. As the discussion of the birthday video revealed, young filmmakers sometimes film with an (imaginative) external audience in mind, one to which the film will never be shown but which is nevertheless inscribed in the film.

In his seminal work on the home movie, Odin pointed out that a text-immanent approach, as was common in French film semiology in the 1970s, would not suffice and had to be replaced by a pragmatic model; to understand how the home movie functions, we would have to look at it as an "*act of communication*" within its specific institutional framework, namely the family (1979, 368). According to Odin, in the home movie, the expectations of the family form the horizon of meaning for concrete cinematic utterances; a home movie makes sense for its audience, not "*in spite of* the figures it is so often criticized for, [but] on the contrary, *thanks* to them" (1979, 355; our translation). The home movie works within the institutional framework of the family because as a text it tends to be open-ended, and as such it is potentially open for different readings and a shared vision at the same time. Thanks to its fragmentary character, Odin claims, what is shown hardly comes into conflict with the viewer's memories. One might add that, unlike professional fiction and

documentary films, classical home movies were never shot for a paying audience, although they might have been made with a particular audience in mind, namely the family.[4] But the question of the audience of children's digital home movies is a complicated matter, especially if there is a "voice-over" by the child talking off-screen: Is the child just commenting to him/herself? Is the comment addressed to an implicit audience? And who is this audience: family members, friends, or some unknown audience "out there" beyond the realm of the private?

Home Videos by Siblings

To further problematize the question of the audience, we would like to discuss here two home videos made by pairs of siblings, in both cases a brother and a sister. In each case, the children are using a smartphone belonging to one of their parents and the boy is in charge of the camera. Both examples are rather long in comparison with other little thumb films: the first one lasts two and a half minutes, while the second is three minutes long. As for the question of the audience, the two examples differ substantially. In the first one, the external audience remains implicit even though the children are literally standing outside (on a balcony), while the second one is filmed inside, in the kitchen, addressing very explicitly an imaginary audience "out there."

The first video is a recording of a sunset made during a family vacation in the summer of 2013. The video is made by an eight-year-old boy with his younger sister, who is presumably standing

4 The paying audience, however, can become part of the child's pretend play, for instance, when children put on shows for their parents or relatives and sell "real" tickets for "real" money. As documented by Meredith Bak, the play of "staging shows" existed also in the nineteenth century; it involved optical toys and aimed at showing children's "perceptual mastery." As she writes: "When children played at staging shows for paying audiences, they displayed this perceptual mastery. Through the coordinated operation of the toys, musical accompaniment, and spoken commentary, they also controlled and interpreted visual phenomena for others" (Bak 2020, 102).

right next to him while he is filming. It is a vertical film, although its subject—a sundown on the horizon—would arguably be better captured in a landscape mode. This might be an indication that in those years the vertical framing was becoming the default mode for filming with a phone, which is easier to hold in an upright position. In the distance, above the surface of the sea, the sun is already at the tip of the horizon. In the foreground, the white balustrade of a balcony is visible. Due to this horizontal demarcation, the handheld-ness of the camera is palpable, making the whole take rather shaky.

Off-screen, we hear the sister saying, "Let's see how long it takes." The children remain silent for a good twenty seconds. Then the girl starts talking again.

> Sister: "Wow, that takes long…"
>
> Brother: "Hmm, it does not take that long… Not as long as you think."
>
> Sister: "Well, it does take long… Now the sun is going down and puts a fart into the film…" *(shushing sounds of laughter)*

From now on, the brother is whispering.

> Brother: "Sshh… Be quiet… Everything needs to be quiet… Quiet…"

Then we hear the sound of a kiss; apparently the girl has kissed her brother while he is filming.

> Brother: "Please stop… I want it to be quiet… Silence…"

After ten seconds of silence, a finger briefly appears in front of the camera. The boy gets even more upset and tells his sister to go inside.

> Brother: "Hey… Go inside… Go inside if you want to disturb… Please go inside… I don't like it when you bother me…"

During the last minute of the video, the siblings remain silent. The two-and-a-half-minute length is not long enough to document the entire sunset; in fact, the sun's position and the light have not changed that much during the filming process.

The boy apparently wanted no dialogue or other sounds on the soundtrack, but there is no (easy) way to turn off the microphone on the phone while filming, so it automatically records all the ambient noises (like a passing car and a dog barking in the distance). Maybe the boy wanted to watch the sundown through the camera/screen in devout silence, as an extraordinary experience. Most probably he "learned" that sunrises and sunsets are considered something special, or sublime, so to speak; the sister, on the other hand, is either too young to pretend to experience the sublime or too frank not to admit how boring the process is and even ridicule it. She turns the video (and the situation) into a kind of comedy with her transgressive comments (about the farting sun) and behavior (distracting the filmmaker with her laughter and by giving him a kiss). But for whom are the siblings making this film? For both, it is about the experience of the moment, which they experience in very different ways, however. The brother wants to experience the sunset by making a video about it (or better, by watching it while filming it); the sister is a bystander, who admires her brother but at the same time disconnects from his (pseudo)adult attitude.

The second home video, made a couple of years later by another pair of siblings, is more openly addressed to an audience, as the children are talking directly to the camera while pointing out various objects. The video was shot on an early morning during the Christmas break. While their parents were still asleep, they "stole" their mother's iPhone and made a vlog in the kitchen. Indeed, the boy, age seven, seems to have a pretty good understanding of what a YouTube vlogger is supposed to do, even though he is growing up in a "media-free" household, where the children have no access to the smartphones and computers of the parents. Intriguingly, they turn the kitchen into a kind of lab for their

forbidden media play, where other forbidden or dangerous tools, such as knives and matches, are means at hand. This resonates with the feminist recognition of forgotten spaces like kitchens for the history of laboratorial practices, as we discussed in Episode 3 (see Livio and Emerson 2019).

The video opens with a selfie-like composition, as the filming brother uses the front-facing camera of the phone to address an (imagined) audience: "Hello, here I am… Here I am in the kitchen… This is my sister." The sister, age five, also tries to come into the picture. After these introductions, the boy pans the camera to the kitchen sink: "Look, this is the faucet… This is the coffee machine…." Thus, the video confirms the descriptive logic discussed in Episode 4. But what we are seeing is not so much a prolongation of the boy's gaze but more some form of reporting, as he continues to use the front-facing camera to point out these different elements in the kitchen. This is rather cumbersome, as he needs to turn the phone's camera/screen away from himself. He continues in the same non-selfie selfie mode: "And this is a lemon." Off-screen we hear the sister saying, "Orange!" And the boy corrects himself: "Oh, yeah, I mean it's an orange."

And the little vlogger goes on naming and pointing out all kinds of kitchen utensils, knives, pots, the stove, etc. Due to the spatial arrangement of the kitchen, but also because it is difficult to film things in front of you with the front-facing camera turned away from you, the focus is lost for a moment and we get to see the ceiling. Then the boy opens a drawer: "And look, here is all the cutlery… This is for the children… and this is for the big ones… the big ones… the big ones… *(he moves the camera back and forth, adding a kind of rhythm to the scene)*, and here we have all the cooking tools… and here are the drawers… and then here you can see, of course…" Off-screen the sister says: "Matches." And the brother says: "Yes… Please light one!"

At this point the camera tries to show the sister who says: "Yes but this is dangerous, very dangerous." Hesitantly, she tries to

light a match. The brother would like her to do it for real, but she keeps on hesitating and then shows how it works without really striking the match against the box. The brother keeps asking if he should do it, but the sister repeats that it would be dangerous. As he is holding the phone, it is not easy for him to intervene, so he tells his sister to take over and film while he is lighting the match. He even tells her about the camera being "different," probably referring to the selfie mode which makes the whole operation so cumbersome. At the point when one thinks that he will finally light the match, he pans away, offering a distraction (very similar to the closing shot of the pancake in the home movie described above). He goes on showing the content of a yet another drawer: "And here are the Chinese chopsticks… and here the last thing." Again, the sister prompts: "A balloon." The brother concludes: "Yes, there are also balloons… but yes… Goodbye, see you next time!"

When the mother found the video on her phone later that day and confronted the boy about the double transgression of using the forbidden smartphone and nearly lighting matches in the kitchen without the presence of adults, he simply replied: "You should put it on YouTube, mom! I want to make more of those videos." Clearly, he had been acquainted with YouTube, probably at a friend's house, and he seemed to know exactly how a vlog works: You greet your audience at the beginning and say goodbye at the end, announcing your next post, as this is a serial activity. And in between you show some interesting stuff and even something risky (a jackass moment). Like the birthday video at the beginning of this episode, this "home video" was obviously made with a nonfamily audience in mind.

Quite remarkable is the use of the front-facing camera in the kitchen vlog, which switches constantly between selfie mode and non-selfie mode, that is, between filming yourself (addressing an imaginary audience) and pointing out the objects (turning the front-facing camera away from yourself). It is quite cumbersome, as we have noted, and sometimes also rather clumsy. But as the

vlog is one continuous take there is no other way around. The birthday girl, on the other hand, uses the normal (non-selfie) camera for the entire take of her video and finds a way to show herself to her audience, at the very end, thanks to the mirror.

In Episode 4, we came across another boy who used the front-facing camera for making non-selfie videos. We discussed how the boy, at the age of five, developed his own "illogical" logic of using the normal camera for taking still pictures (photography) and the selfie camera for taking moving images (videography), even if he himself was not the subject. One day the boy also made a "home movie," trying to capture with the selfie camera his little sister who was running away from him. Here we recognize the same clumsiness as in the kitchen vlog. The film, which lasts 37 seconds, is quite "messy" and disorientating for the external audience, which is not addressed by the boy, as he is merely exploring and transgressing videographic codes. First, he is walking and humming through the house, then he starts running after his sister and shouts: "Where are you going, little sis?" In the end, he manages to get a brief glimpse of her on the screen of the phone, using its front-facing camera.

There are more examples of sibling films we could discuss here, mostly of older siblings filming their younger brothers or sisters. As shown by the above "coproduced" home movies, it is often the oldest one who takes the initiative and is in control of the camera. But the role of the assistant director should not be underestimated. We like to put the younger ones of the family in the limelight, as they reinvent the more traditional home movie, like the girl of the pancake video or the birthday girl of the opening anecdote. They recall the "urchin" of Charles Perrault's rhyming moral, which we quoted in Episode 1, as they bring fortune "to all [their] family" (Perrault 1922, 125), as well as to the family-based film.

Playing Cinema

As evidenced by the sibling films, children have a rather precise knowledge about certain formats (such as the YouTube vlog) and they also negotiate among each other about the rules of filmmaking. In our research, we came across several videos that are about the process of filmmaking, which becomes the center of the play. In other words, it is about playing cinema while making cinema. In Episode 4, we described the singie of a girl panning the camera/phone around her room while humming an improvised metafilmic song: "I am filming lalala I am filming lalala." Here we want to look more closely at playing cinema as a group activity, taking place within the home or in a home setting, and not limited to siblings but also involving friends.

Although traditional home movies are most often made by one "director," there is usually also a "crew" consisting of the mothers who are codirecting the "stars" (making sure they are not leaving the set), the actors (the nuclear family members, mainly the children), supporting cast and extras (extended family, including pets) (Schneider 2004). In the case of the little thumb films, we found several examples of "codirectorship" or collaborative directing, especially in those that result from playing cinema or, rather, from the play of making films. A pertinent example is the play of making films and remakes by two girls aged five, in the summer of 2013. Their play took place in the holiday apartment of one of the girls, who had "inherited" an old point-and-shoot camera from her mother. The device had a sliding mode switch on the back that made it easy to go from still photography to video recording (and playback mode). As well as a viewfinder, it came with an embedded LCD screen, which allowed watching the recording process while filming, that is, experiencing the filming as filming.

The girl with the camera makes the first film. But the filming is a way of explaining to her friend how to shoot a film with this particular photo-camera. At the beginning of the film, we hear

her saying that if you see the red dot, “then you are filming.” By means of the camera, she rediscovers the space of the apartment: she shows it to her friend and to the camera, by walking and dancing from one room to the next, and at the same time she demonstrates to the friend how to make a film. There is a certain rhythm and pace in the improvised real-time soundtrack and, for a moment, the filming girl is visible in the mirror of one of the bedrooms. It is a glimpse of her reflection, captured by the camera.

After being instructed about filmmaking, the friend makes her own film, which starts off with the same framing as the “original” and lasts one second less: 33 seconds. The remake has a clear beginning and a clear ending. Off-screen we hear the first girl, now in the role of an assistant director, saying: “Now you are filming”; and at the end she asks: “Is it turned off, is it turned off?” And the friend answers: “It is finished.” While the first girl is clearly familiar with the spatial dimensions of the apartment and walks with confidence from one room to the other when shooting her film, her friend is less concerned with the space itself. This might be because the apartment does not have much emotional meaning for her. She is just a visitor—these rooms are not hers. Even if she repeats the same visual exploration through the apartment, she is more interested in filming an imaginative script, closely following the instructions of her assistant director, producer, and friend. Her film is more about the experience of a friendship and the playful act of filmmaking. At the same time, the girls negotiate their understanding of what they consider to be a “film” and how to make one.

The girls’ joint act of filming did not end here. After her first exercise as film director, the second girl immediately made a second remake, which lasts almost three times longer than the “original” at one minute and 22 seconds. The shooting location is still the same apartment, and the shared experience of filming is again underscored by the dialogue between the two girls that is recorded on/as the film’s soundtrack. This time, the instructions

from the first girl become a bit more bossy and coercive. It goes as follows:

> Girl 1: "Keep straight! Keep straight all the time, okay? You need to keep it straight. Keep straight, keep straight."
>
> Girl 2: "But I keep it straight!"
>
> Girl 1: "Are you going to film me as well?"

And, then, more towards the end:

> Girl 1: "Is it now finished? Is it finished? Yes? Is it finished?"
>
> Girl 2: "No!"
>
> Girl 1: "Is it never finished? Is it finished?"
>
> Girl 2: "No, I still need…"
>
> Girl 1: "Are you going outside? Are you going to film outside? Are you going to film outside here?" *(She is pointing outside the window, which is the only window of the apartment with a partial view of the sea.)*
>
> Girl 2: "Yes."
>
> Girl 1: "Good, good… Is it stopped? Shall I … stop it?"
>
> Girl 2: "No not yet." *(Adult intervention off-screen: "Soon you won't have enough memory on the card. You rather stop now.")*
>
> Girl 2: "It's ready."

In this second remake, the respective mothers make a brief appearance as improvised or accidental "extras"; one is busy with her smartphone, while the other is reading a paper on the couch. With the exception of the end, they do not intervene.

Two issues are at stake here: the remake as repetition and the principle of the rule-based game, which is generally distinguished from the free play of children (as, for instance, theorized by Roger

Caillois [2001]).[5] Whereas the first remake would qualify as a filmic remake in a very strict or literal sense insofar that it not only copies the framing of the original but even has a nearly identical running time, the second one is closer to what some would call, from a scholarly perspective, an "adaptation." It differs from the initial video not only in length but also in terms of *mise-en-scène*: the second girl decides to focus on details in the apartment, like a handmade paper flower, and she seems also rather determined to make a short video portrait of the two mothers. Most importantly, she does not allow the first girl to take over full control. In terms of playing, one could describe the first remake as an imitation that was made within the framework of a competition between the two filming girls, while the second one is rather structured by their negotiation or renegotiation of rules. Countering the notion of the child's free-of-rules play, the second remake clearly hints at the very common practice of ad hoc games with negotiable (or nonnegotiable) rules. Young children tend to establish very specific rules in their play, even in their pretend play ("I am the princess, you are the prince," "I do this and you do that," etc.). Often, they even come up with some basic scripting of their playing experience beforehand. This is exactly what happens in the shared filming experience of the two girls. Different from codified rules, their rules are moldable.

As child psychologist Elly Singer notes:

> With young children the rules and the structure of play are still simple and loose [and they] can easily be changed during the course of the play. The play of young children often has the character of a repeated series of actions. . . . Through

5 In Caillois's *Man, Play and Games* (originally published in 1958), this distinction is rather pronounced, as it forms the basis of the scale between two opposite poles: *paidia* and *ludus*. While the latter manifests a "growing tendency to bind [play] with arbitrary, imperative, and purposely tedious conventions," the former is characterized by "carefree gaiety" and "uncontrolled fantasy," typical of the child's play (Caillois 2001, 13). Indeed, Caillois chose the term *paidia* "because its root is the word for child" (2001, 27).

> repetition and variations on series of actions, young children together with caregivers and other children "co-construct" a shared play-reality. (2013, 175)

Following Singer's line of thought, we can describe the remake by children as a form of repetition, which applies well to the case of the two filming girls, who most probably did not know the concept of a remake at that age. Their play was more about showing, teaching, sharing, and repeating something. The remake as repetition can be connected to the practice of children endlessly repeating their games as a form of joy. As Walter Benjamin observed, repetition is "the great law that presides over the rules and rhythms of the entire world of play," because for the child, "repetition is the soul of play . . . nothing gives [her] greater pleasure than to 'Do it again!'" (2005b, 120). But the rule of repetition also entails a possibility of change as "*this time* things may be different" (Powers 2018, 721). Apart from the pleasure of repetition and the negotiation of rules, the remakes by the two girls are also good illustrations of how young children intuitively play with film: the play of filming transforming itself into the play of making remakes.

Playing TV

While the play of making remakes is a form a repetition, children often start a series that is never finished or completed. They might start a new notebook with a story that only has one chapter, or a diary with only a couple of daily entries. In Episode 1, we discussed the TV documentary by three sisters, another example of a sibling coproduction made in 2003 during the holiday in the garden/jungle of their grandmother. They made only one episode, called "Episode," intended to be the first of a series, like the kitchen vlog. For the (traditional) home movie discussion, it is worth recalling that the three sisters chose the format of the episodic TV documentary, because this was a genre that their father loved to watch. But it is also a "home movie" that

 shifted the focus of our discussion from playing cinema to playing television.

Here we want to discuss another TV project, played/produced by a group of four girls ten years later, on a Sunday afternoon in 2013, at someone's home. Apparently the girls, who were between the ages of seven and ten, had an idea for a game, of which some traces were later found on an electronic tablet: a collection of 34 video files (ranging from two seconds to three minutes long), together approximately twenty minutes of audio-visual material, shot in one hour of play. Particularly striking about this collection is that, due to the sheer amount of material, we get a rather detailed view of the activity of the girls. But there is also an uncanny surveillance aspect to it, as we are able to look into the playtime of children, monitored in nearly real-time, as a third of the actual play time takes place in front of a running camera.

It seems that the girls wanted to make a TV show together, a kind of news and tutorial show for an imaginary audience. The structure of each news item is more or less the same. First, the girl who is the presenter says hello to the imaginary audience (or the camera), then she presents the thing that will be discussed in the news item (in most cases it is a toy, such as a Furby digital pet, plastic horses, a ball, and a book, but there is also a towel and a brush). The presentation is followed by an interview with an expert (another girl) about the function or invention of the toy, often concluded by an interview with the supposed maker of the gadget (again one of the girls). The girls are quite strict—or repetitive—about the internal structure of their TV items and the content; much correcting of each other is being done. In one take, a girl criticizes another girl for giving more a lecture than a real TV show performance. Most files are quite short—not infrequently because something went wrong and the girls decided to stop and restart the shooting process. During the hour they played together, they also get more and more into little quarrels about their respective roles, about how to behave in front of the

camera, and about being distracted by eating sweets. Here is an original sound bite from one of the takes:

> TV presenter: "Hello, this is the news… and I will tell you something about towels… They are handy for drying yourself."
>
> The girl behind the camera *(off-screen)*: "This sounds more like a lecture and not like a news item."
>
> TV presenter: "Well this towel… is a kind of cape… And now the narrator will tell you more…"
>
> The girl behind the camera *(off-screen)*: "No, we had discussed that I will be the narrator this time…"

The negotiation between the filming girls is recorded as "ambient sound" of the videos. Similar to the TV documentary by the three sisters discussed in Episode 1, this TV show is very much about role-play and working with an implicit script.

More generally, we can conclude that the TV project/play underlines several key aspects of children's home movies. First, it is a good example of how contemporary media formats are used as sources of inspiration. Second, it shows how children negotiate the making of media in their everyday play. Third, it foregrounds once more the promise of repetition, which is offered as a possibility of change and difference.

Media without Boundaries?

In this episode, we followed the traces of the filming fathers from the past to the present (and future) of filmmaking daughters, from "his-stories" to "her-stories," from analog home movies to digital home videos. We moved from home videos made by siblings to home videos made by a group of friends, in other words, from the strict boundaries of the home/family with sibling coproductions to the extended family with group projects in film and TV making.

186 Especially in the 1930s home movies came across as personal inventories of bourgeois ownership: this is my car, my wife, my kid, my dog. And if filmed on a festive occasion such as a birthday or Christmas, one might also get a glimpse of some of the presents, especially toys. But such an adult or paternal gaze is no longer the dominant "home mode" of communication. The daughters of the 21st century are making home movies of their own, by undermining the conventions of the home movie as a genre and by expanding it into a new type of cinema. By playing cinema and playing television, they reinvent cinema, not least by transgressing medium specificity.

Epilogue

After all, storytelling, in its sensory aspect, is by no means a job for the voice alone. Rather, in genuine storytelling what is expressed gains support in a hundred ways from the work-seasoned gestures of the hand.
Walter Benjamin ("The Storyteller," 1936)

This Movie Is Called *IPAD*

As discussed in the various episodes of this book, most little thumb films or *films-poucettes* are orphaned as soon as they are made, that is, as soon as the play of cinema ends. Such a practice challenges traditional notions of authorship. Little thumb films made with a compact camera or mobile phone are automatically saved on the camera roll of the device, among still pictures, and when transferred to a computer or hard drive they are saved with a numerical file name. These are film productions without a title, without a name. In the early stages of app development, children also started to explore apps to make their own cinema. In Episode 2, we briefly looked at children's cinematic hacking of office apps, like Voice Memos and JotNot Pro, which are usually saved with a numerical title. In Episode 4, we discussed the success of Musical.ly among young girls as a way of making their own music videos. The output of this app-based cinema could be shared online but was also automatically (and numerically) saved to the phone's camera roll. Throughout the book, we focused on children's media creations that were not (made to be) shared on social media platforms, even if several little filmmakers of our research project clearly had knowledge of the emerging online media culture and were even directly influenced by YouTubers or Musical.ly stars (or so-called musers).

During the 2010s, many amateur and semiprofessional film-making apps appeared on the digital market, ranging from storyboard and scriptwriting aids to lighting, framing, and editing tools, to stop motion and GIF makers. Some apps were designed specifically for children, like the Flipbook Animation app, which combines Ruth Faison Shaw's finger painting (discussed in Episode 4) with the principle of the nineteenth-century flipbook, which is quite appropriately called *Daumenkino* ("thumb cinema") in German—a term to which our notion of little thumb film is loosely connected.

In 2013, a six-year-old girl used the Flipbook Animation app to make her first animated film. From the app's preestablished catalog, she picked a background with the Earth and the Moon seen from an undefined point in space. In nine sequential images (lasting only two seconds in total), she drew a rocket that goes back and forth between the two celestial bodies, changed the colors of both, and added a red Saturn between them. It is important to note that the Flipbook Animation app requires a film title and the young filmmaker's name to create and save a clip. The girl did not pick a title that reflected the little narrative of her clip ("from here to the moon and back"). Instead, she named it *IPAD* in reference to the basic apparatus she was operating with her small fingers (which also became part of the cinematic apparatus, as discussed in Episode 1).

To film historians the two-second movie entitled *IPAD* might evoke *Le Voyage dans la Lune* (*A Trip to the Moon*, 1902) by Georges Méliès, in particular the iconic scene halfway through the film where the rocket lands on the moon, or rather in one of its eyes. Instead of moving the camera towards the object representing the moon, Méliès moved the moon to the camera—a trick he had already tried out in *L'Homme à la tête en caoutchouc* (*The Man with the Rubber Head*, 1901). Lasting about seventeen seconds, this moon-landing scene is the main attraction of the film. On the one hand, it is purely spectacular and illustrative of early cinema's "trickality," according to which the narrative is a mere pretext to

show off new film tricks (Gaudreault 1987); on the other, it also has a narrative function, as it shows the passage from the Earth to the Moon. In early cinema studies, the tension between attraction and narration has been heavily debated (see, among others, Elsaesser 1990 and Strauven 2006). Although we never made the claim that little thumb films share characteristics with early cinema, we may have emphasized their "attraction value" over their narrative dimension. But children do tell visual stories, not only in their drawings but also in their digital videos, which allow for constructing (or condensing) complex narratives in extremely short screen times, like space travel in only two seconds.

Let's Cut to Black

We would like to end our book with an animation film made in 2016 by two boys aged eleven that summons more space travel and at the same time offers a couple of narrative gimmicks on how to end your story. The video, which lasts 49 seconds, is without title but starts like a fairytale, like our first episode: "Once upon a time…" The various scenes consist of handmade aquarelles and pencil drawings that were photographed and put together as a sequence with iMotion, an intuitive time-lapse and stop-motion app. Then the boys did some "postproduction" in iMovie, editing the images, and adding the voices of the characters as well as a music track. The video features their self-designed cartoon character, Fritpak (meaning a bag of French fries), which had appeared already in some comic strips that the boys had made together and which later returned in a series of further videos they posted on YouTube.[1] In their first video of 2016, Fritpak challenges a pig called Footless to a boxing match. Both figures are hand-drawn cutout paper figures placed within,

1 In December 2018, the boys created a Fritpak video channel on YouTube with four short animation videos. See https://www.youtube.com/@fritpak5329, accessed November 8, 2024. In the summer of 2019, they were, at the age of fourteen, the youngest cartoonists ever at the International Cartoon Festival of Knokke-Heist, Belgium (Van Remoortere 2019).

and moved around, a boxing arena. When Fritpak launches a first strike at Footless, the screen says in a typical zap image: "Boom." And then, in a new drawing, we see Footless spinning around the Earth. Follows a fart and, finally, a series of handwritten intertitles:

> Suddenly the world exploded for no reason
> Everybody was dead
> End
> *(Cut to black)*

Whereas the *IPAD* movie lasted only two seconds, the Fritpak cartoon adds two seconds of black to its handmade/animated drawings. In total, the ending occupies sixteen seconds, which is about a third of the animated clip: it is an accumulation of new and existing ending formulas, such as a closing title and the fading or cutting to black. Here, the reinvention of cinematic norms or techniques consists in its redundancy or pleonastic use. It is a sixteen-second catalogue of possible endings: from boom to fart, from global explosion to the extinction of humankind, from the word "end" to a black screen.

Storytelling was once defined by Walter Benjamin as one of the "oldest forms of craftsmanship" because of its (narrative) techniques of weaving and spinning that give shape to the "art of repeating stories" and create a fundamental link between teller and listener (Benjamin 2006b, 149). In the animated cartoon, as in many other little thumb films, storytelling has become an art of repeated actions, of possible new stories, of infinite new ways of rediscovering and reinventing cinema. From accidentally recording with a compact camera to sneakily filming with your mother's phone; from turning the lens around and dancing with the camera to switching camera options during the filming process; from making non-selfies with the selfie camera to single-hand gesturing and lip-syncing to sound bites; from cameraless to app-based cinema; from finger painting on an electronic device to manipulating hand-drawn and cutout figures in stop motion;

from making videos of motionless objects to taking endless series of snapshots—all this constitutes the new art of repeated actions, of little thumb films or *films-poucettes*, of cinema reinvented by the youngest generation of filmmakers ever.

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Alexandra Schneider and Wanda Strauven
Children Reinventing Cinema: Snapshots from the Early 21st Century

Children today discover a new digital drawing tool, the camera-crayon, at a very young age. They appropriate devices such as compact cameras and mobile phones and make their own media artifacts in their play. Expanding on a media-archaeological approach to film history, this book maps children's playful and imaginative knowledge of contemporary media culture and explores their filmmaking practices that push the boundaries of forms and formats.

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