

## Case Studies 2 – Narrative and Perspective Shifts

### It's Not Childs' Play: Changing Corporate Narratives Through Ethnography

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*After discovering that there were over 25 projects going on in various business units in the company that involved children as end users, and that most people had a limited understanding of children's play, the researchers proposed a multi-cultural ethnographic project called ChildsPlay. This case study illustrates the many ways that a well-planned ethnographic study can influence the trajectory of a company's culture, highlighting institutional challenges, describing the ethnographic methods and theoretical underpinnings that guided the research and its analysis, and touching upon the importance of play as an anthropological focal point. The case study closes with a discussion of a notable shift in the narrative around Intel's child-focused product efforts, and the tangible outcomes of the research with respect to product development.*

*Keywords: Ethnographic case study, Play, Culture, Gender, Technology, Narrative Shifts*

For many years the conviction has grown upon me that civilization arises and unfolds in and as play. (Huizinga, 1949)

#### THE SETTING

When the ChildsPlay project began, the authors both worked at Intel. They worked in two different business units: Anne in the New Devices Group, and Thérèse in Intel Education, which resided within the Sales and Marketing Group. Anne had been working on a smart toy landscaping exercise, and had reached out to people doing work within the company related to toys and games and to her surprise she discovered that there were more than 25 prototyping or development projects that involved children as end users.

The exploratory work on toys and games led to a brainstorm session focused on “smart toy” concepts, which is how Anne and Thérèse found themselves sitting together in a room full of male engineers and business people from around the company. As happens in good brainstorm sessions, ideas flowed freely. By the end of the day, the team had amassed close to 100 ideas, categorized them, and voted on which ideas were worth considering further.

At one point during the day, Thérèse had asked the team to “imagine the user we should be designing for, describe what they look like, how old they are, and what they enjoy doing.” Overwhelmingly, the men on the team all described a ten-year-old version of themselves, forgetting about girls and anyone without a propensity for engineering. Anne then commented that a majority of the ideas throughout the day were boy-oriented, which now made sense because the majority of the brainstorm participants were describing their own interests. She wondered out loud, “Don't girls need technology toys too?” She went on to explain that if girls were ever to develop an interest in technology it was essential that they be exposed to it. Thérèse agreed. As the day wore on some “girl” ideas were floated, but most of the ideas from the men in the room were stereotypical, princess and fashion-

focused, in contrast to the “boy” ideas, which were more building, programming, and problem-solving oriented.

Throughout, Anne and Thérèse documented questions raised by the team; there were a lot of unknowns around the current state of play and interests of children. What analog toys did children play with today? What digital toys? How different was girl and boy play? Are gender neutral toys really the answer, or do we want to make toys for boys and girls that teach the same skills? Do today’s kids really still care about Harry Potter or Nancy Drew? What shows on TV were kids watching? What media were they using? How many had access to phones? What were the overriding concerns of parents around play and technology? How much money were parents willing to pay for a smart toy?

Privately, Anne and Thérèse commiserated about the lack of cool tech toys for girls. Both authors had invested large swaths of their careers to issues related to gender parity, in recent years both focusing on getting girls interested in STEM fields. They saw that this moment might provide an opportunity to shift the narrative within the company, and possibly in the toy industry. Anne and Thérèse suggested that a deeper dive into these and other questions might be helpful. The team agreed that there was a clear need for research. Although, Thérèse and Anne had a keen interest in exploring issues of gender, in the interest of garnering support, they felt compelled to deemphasize that aspect of the work in the proposal phase, instead focusing on some of the more tactical benefits of doing a general study of play. They had a hunch that gender would surface, regardless.

The following case study describes a subset of the resulting research, ChildsPlay—how it unfolded, why an ethnographic approach was the best approach, other methodological decisions, research findings, and outcomes.

## **ACT I: CHILDS’ PLAY, CROSS-CULTURAL COMPARATIVE STUDY OF PLAY**

Anne and Thérèse recommended an ethnographic approach because they felt that a quantitative approach alone would not adequately explain the complex social and cultural aspects of play. Play has long been the subject of anthropological inquiry and as such, a rich theoretical corpus has evolved on the topic (Karpatschhof, 2013). Anthropologists and psychologists widely accept that culture and play are intimately intertwined, that children’s play reflects the cultures in which it takes place, and that play is a central human activity in which children learn how to be fully functioning adults within the bounds of their social and cultural environments (Holmes, 2013). Although the theoretical literature on play is rich, the cross-cultural comparative study of play in industry is spotty, and often narrowly focused on particular types of play (e.g., imaginative play). Anne and Thérèse wanted to gain insights into the broader spectrum of play over the entire arch of childhood, from pre-school through high school ages, in relevant markets, and also to understand play from both the child and parent perspectives.

### **Study Overview**

The researchers knew that getting funding for this research would be difficult. Most UX teams in product groups at Intel have limited research budgets compared with marketing teams. To do the type of project they wanted to do, Anne and Thérèse knew that they would have to do the research on a tight budget, and also get money from multiple stakeholders.

Therefore, they developed a proposal with a lot of built-in flexibility to shop around to potential sponsors and show potential impact and implications specific to their individual business unit needs. In addition to doing as much of the research heavy-lifting themselves, they proposed doing the research in phases (Figure 1), thus being able to demonstrate the value of the effort and potential added value of comparative studies in countries other than the US

The pilot phase of the research (see Figure 1) consisted of in-home participant-observation of play sessions with kids and informal semi-structured interviews with parents and children aged 3 to 13. Anne and Thérèse decided to focus the in-home sessions on children under 13. They knew from previous research they and their colleagues had done that children begin transitioning from playing with traditional toys to predominantly digital play as early as age 7, and with the exception of playing sports most kids in their teen years engage almost exclusively in digital play (Lenhart, 2015). For this reason, data collection for teens was limited to the quantitative portion of the study. To economize further, the researchers used a snowball sampling approach, drawing on friends-of-friends in the San Francisco Bay Area and Portland, OR metropolitan area. Effort went into recruiting families that represented a range of income categories, from lower middle to high income, and ethnicities that would reflect the cultural diversity of life in the US.

The data collected in Phase I informed the development of the two surveys for Phase II. Anne and Thérèse designed the initial survey and hired a third-party vendor that had a strong parent-child panel and experience with surveying children on a variety of topics. The vendor administered the kid survey and the parent survey simultaneously. The vendor suggested using a single- branched survey design that would involve parents recruiting the children, an approach that worked well. The vendor sent out participation invitations to members of their panel known to have children. After parents were qualified through a set of screening questions, they were asked if one of their age-qualified children were available to complete a short survey.

One of the advantages to this approach was that it streamlined parent permission for completing the survey. Another advantage was that it simplified recruiting considerably. Anne and Thérèse decided to survey only children aged 8 and up because they did not feel that one could reasonably expect younger children to have developed the reading and cognitive skills to complete such a survey on their own. The parent survey sampled the parents of children across the full spectrum of ages.

Upon conclusion of Phase II, the researchers presented preliminary findings to stakeholder groups, demonstrating the value of the research, and garnered the funding and support to duplicate the research in two other geographies. They had originally proposed extending the study to one European country, China, India, and Brazil, but only succeeded getting funding for two of the four due to budget constraints in the sponsoring organizations. Because both European and Asian markets are a priority to the company, they selected Germany and China.

Phase I	Phase II	Phase III
Pilot Research <ul style="list-style-type: none"> <li>• 14 households</li> <li>• Distributed across households with kids ages 3-5, 6-8, 9-12</li> <li>• Non-Intel*, network recruiting</li> <li>• Test survey designs</li> </ul> <p>* Intel families are pre-disposed to technology. In NDG we have done comparative studies that demonstrate the need to do research outside of the Intel family.</p>	Kid Survey (US) (n = 200) <ul style="list-style-type: none"> <li>• 10 minutes</li> <li>• Children ages 8-18</li> <li>• Quotas for age groups and gender</li> </ul> Parent Survey (US) (n = 300) <ul style="list-style-type: none"> <li>• 15 minutes</li> <li>• Quotas by age and gender of children</li> </ul>	Global Research (Germany and China) Kid Survey (n = 200) Parent Survey (n = 300) In-home interviews (11 households per country; 1.5-2 hours in duration interviews with parents and children, including observations of play and play areas)

Figure 1. Three phases of the ChildsPlay research. Phases I and II were in the US and laid the foundation for research in other countries in Phase III. The original proposal also included India and Brazil. All participants for in-home interviews were considered middle to upper class within their country. Researchers conducted in-home research in the Portland, San Francisco Bay, Frankfurt, and Shanghai metropolitan areas. Survey data provided a broader selected sample of people from different social economic groups, gender, age, family dynamic, and location from the whole country.

## ACT II: THE STORY UNFOLDS

The ChildsPlay research project generated a significant body of data with many interesting results. The present discussion covers three key stories—Culture Matters, Orientations Toward Play, and the Gender Story—discoverable only from an ethnographic perspective and methodological approach. Had Anne and Thérèse limited data collection to surveys, a data collection method that is currently favored within the company, these key explanatory insight areas might not have come to light. Without participant-observation, making sense of the broader quantitative data and understanding how it relates to the future of play, it would have been considerably more difficult, if not impossible, to draw actionable insights.

### Culture Matters

Compared to qualitative sources of data, Intel more typically uses quantitative data. Therefore, Anne and Thérèse had to make a case for including participant-observation, in-home interviewing, and play context documentation in their research. The pilot phase (see Table, the US in-home sessions) provided the justification sponsors on the business side needed in the form of valuable insights into the ways in which non-quantifiable aspects of cultural context shape play. A discussion of three areas of cultural significance drawn from both research phases follows: settlement patterns, social institutions, and gender roles.

**Settlement Patterns** – A key difference between the US, China, and Germany is in the density of settlement, and the availability of outdoor play spaces that are contiguous to the home. In the US, a majority of homes have yards, even multi-family dwellings typically have a place to play, except in the most densely settled cities. Overall, Germany tends to be more densely settled even in the villages where houses are clustered tightly around a central point. German homes usually have small yards or patios, or a larger area that is shared by a group

of homes. Their access to a contiguous outdoor play area is slightly less common than in the US. In China, the most densely settled of the three, access to a contiguous outdoor space to play is rarer. Interior space does not differ dramatically between the three in terms of size.

Clearly, having safe outdoor places to play by one’s home makes the possibility of outdoor play greater. Because US citizens have more outdoor space available (as measured by survey), one might therefore assume them to have a greater orientation toward outdoor play than the either German or Chinese families. From an ethnographic perspective, this did not turn out to be the case. German families place a much higher premium on free outdoor play than either Americans or Chinese. One interesting finding from our ethnographic research is that a relatively high proportion of participants belonged to a *schrebergarten*, a German institution of allotment gardens established in the late 19<sup>th</sup> century. These urban families without contiguous play space often spent weekends in the *schrebergarten* explicitly “so that the children can play outdoors” (German Mother).

Because of the lack of outdoor play spaces by the home in China, outdoor play is a rarity. Many Chinese parents also expressed greater perceived risks of playing outdoors: “It is so dirty,” “Too dangerous,” “Too polluted.” Some parents among the participants allowed their child to play a team sport outdoors, but other parents found even this activity too dangerous. An additional cultural particularity relates to a general restriction on unstructured playtime.

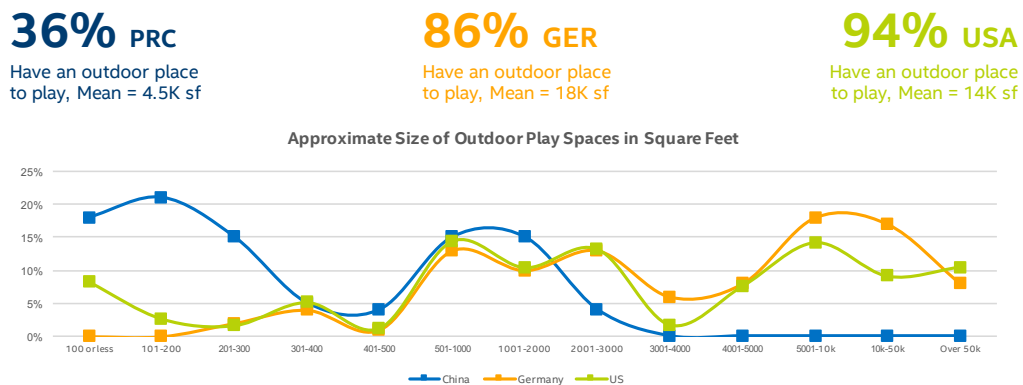


Figure 2. Availability of contiguous outdoor places to play has ramifications for product design and marketing of toys intended for outdoor use. Understanding settlement patterns and how different peoples think about outdoor play is also important.

**Social Institutions** – One aspect of social life that has a huge impact on how, when, and where children play is the education system—the length and regularity of the school day, and availability of childcare (Figure 3). German children spend the least amount of time in school (3 to 4 hours per day), and have the greatest freedom with it comes to unstructured time, while Chinese children have the longest school day (7 to 8 hours per day), and have the least amount of time for unstructured play. From day to day, a German child’s school day can vary; a German child may have a different schedule every day of the week. Both US and Chinese children attend school consistently during the same times every day of the week during the school year.

Furthermore, when outside of school German mothers usually supervise their children, as mothers do not regularly work outside the home. In addition, institutionalized childcare available outside of school hours is limited. In the US, mothers typically work outside the home and rely on after school day care or extracurricular activities to entertain their children after the children finish school and before their parents return from work. In China, families tend to rely more heavily on grandparents or other family members to watch children outside school time, since in most families both parents work long hours.

Each of these cultures embraces differing ideas about how children should spend their “free time.” Chinese parents prefer their children focus on educational pursuits outside of school time. Many Chinese children remain at school to take “catch up” classes, classes that are more about keeping up with heavy academic workloads or getting ahead than skills-training. Chinese parents actively discourage their children from participating in “frivolous” activities, like dance and art classes. They believe such activities will do nothing toward making their child competitive for University. Music lessons are one exception. For example, one 8-year-old girl lamented that her parents would not allow her to go to a hip-hop dance class, and her mother explained that her daughter needed to focus on academics.

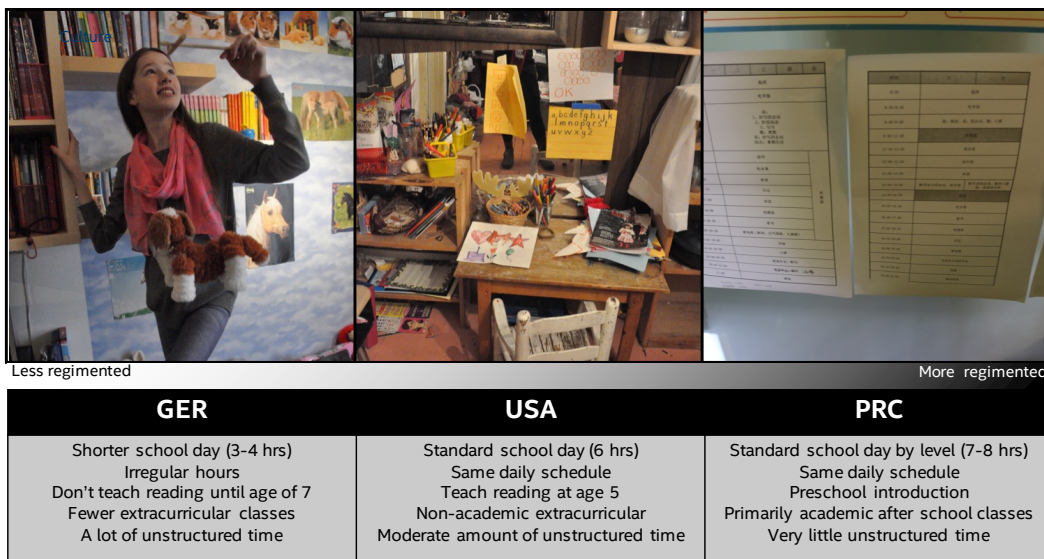


Figure 3. Social institutions, like the education systems, and the consequent amount of unstructured time available to children, shape play, and degrees of freedom in play. German children have the greatest freedom with their time (fewer scheduled activities and more free play), while Chinese children have the least (more scheduled activities and less free play).

By contrast, a majority of US child participants engage in a wide-range of non-academic activities after school, both structured and unstructured, activities dominated by sports, and after-school clubs related to other interests, like acting. Some children attend tutoring after school if they struggle with a particular subject area. Overall, German children engage in the fewest planned activities during their free time, and parents encourage them to entertain themselves (Figure 3). Reflecting this sentiment, one German mother said, “It is completely fine if my daughters only play with what they want. I try to help them to be able to do what

they want, but they mainly play on their own.” Most, but not all, of the mothers we spoke to in Germany encourage free and fantasy play. Furthermore, the value placed on self-management and open-ended play in childhood also extends to outdoor play, especially in smaller suburban settlements.

**Gender Roles** – Women are the primary care takers in Germany, the US, and in China, but their lives vary considerably in part because their support networks, availability of childcare, and work opportunities vary so much. German mothers lament the social system that gives them such lengthy maternity social support, because in their view it functions ultimately to keep them out of the workforce as full-time employees. They complain of feeling systemic pressure to stay home with their children, even when they would prefer working. For women who decide to work, the length and variability of the school day, presents special challenges, since daycare is not readily available, and most mothers don’t have extensive, nearby family networks to rely upon.

In contrast, all but one of the Chinese mothers in the study, worked full-time, made possible by the fact that the school day is long and regular. Another enabling factor is that a majority of the Chinese families either have a grandmother or other family members, living with them or nearby who help out with the children. Most of the time that women in China spend with their children is in attending to them while they do their homework. During the short periods of unstructured playtime, children have the freedom to play on their own, but with more limitations on screen time than do either US or German children.



Figure 4. Institutional and social support for women varies greatly by country, especially when it comes to availability of childcare. This was most problematic for our German participants.

The US presents more of a mixed picture—some mothers in our study work outside of the home full-time, others run businesses from home, and for the sake of flexibility, a few work part-time. Most US mothers that we spoke to feel that they had made a choice about working or not working. In some cases, they work out schedules that are mutually beneficial

to their partners. This allows partners time to spend with their children, help them with homework, or ferry the kids to one of their many after-school activities. US children have more freedom to play than Chinese children, but less than German children.

## **Orientations Toward Play**

**The Five Orientations** – In analyzing the in-home research data, Anne and Thérèse identified five orientations to play (Figure 5). Each of these orientations are evident to greater or lesser degrees in each country, reflecting propensities engendered by cultural perspectives, some touched upon above. While none of the orientations are anti-technology, some types are more predisposed to technology than others. In all countries and all households, screen technologies are pervasive. In addition to screen technologies, many households own and use a broad range of electronic toys, including handheld games, musical, robotic and animatronic toys.

1. *Outdoor/Physical.* These families favor outdoor play, often reflected in the fact that they engage in one or more outdoor sports, sometimes as a family. For these families, fitness is a priority.
2. *Tech/Independents.* Children in Tech/Independent households have a lot of freedom when it comes to using technology. Unlike other types, they have few restrictions on amount of time using technology, or even on what they are doing. Parents in these households believe that their children need to learn to use technology for success in the future, and to use it responsibly. These households tend to have many gadgets.
3. *Education/Regimented.* These households are highly scheduled, and they structure almost all activities, including play activities with educational goals in mind. These homes have the smallest toy collections, but the toys owned are usually of high quality.
4. *Creative/Analog.* Creative/analog homes are all about “making from scratch,” and typically display a lot of children-made art, as well as parent-made items. Creative/Analog appreciate free play with raw materials, and encourage their children to engage in both guided and unguided making activities. Making can be digital as well as analog, for example film making.
5. *Creative/Independents.* The value of free imaginative play over making distinguishes Creative/Independents from Creative/Analog. In these homes, children frequently have few “toys” or materials to play with. However, they may have lots of dress-up clothes. While parents sometimes engage in play, they expect their children to entertain themselves.

To develop the five orientations, researchers identified 7 key vectors in their analysis of participant-observation notes and interview transcripts. Vectors they identified included:

- Outdoor—Indoor: degree to which households favored indoor vs. outdoor play
- Technology—Analog: degree to which analog play valued over digital play
- Bedroom—Whole house: where indoor play predominantly took place in the home, in an isolated space like a bedroom or playroom vs. all over the home



- Independent—Family: whether children played mostly on their own or with other family members
- Guided—Open-ended: whether an adult with specific goals in mind guided play activities (e.g., building a kit), or the child directed the play and play was open-ended.
- Educational—Physical: degree to which play focused on educational and cognitive goals vs. being physically active
- Regimented—Creative: scheduled and structured activities vs. free-choice activities

The researchers assigned scores to each family taking both child and parent perspectives into consideration. Each researcher scored the families independently and averaged scores to come up with the orientation schema particular to each family.

While each orientation type is present across all three countries, to greater or lesser degrees each culture exhibits propensities toward particular orientations. For the US, what we call the Creative/Analog orientation, and the Tech/Independent orientations are more prevalent. In China, the Education/Regimented type dominates across households even though there are exceptions. In Germany, the Creative/Independent type dominates. Furthermore, the types are not mutually exclusive, and many families exhibit a mix of orientations. For example, all families in China exhibit a strong propensity toward educational play, but some simultaneously value creative open-ended play.

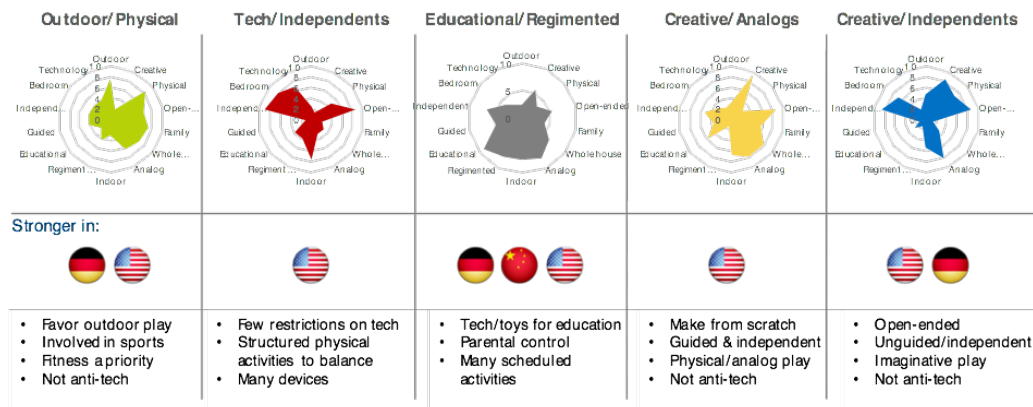


Figure 5. Five identified orientations toward play were identified in all three countries to greater and lesser degrees.

**Usefulness of Orientations** – These five play orientations, and an understanding of how they relate to different cultural perspectives, have been very useful in thinking about how to position, market and message products. For example, our study shows that Chinese families highly value toys and games that are education-oriented. Therefore, even if designing a smart toy for the US market with “making from scratch” in mind, one may find success in the Chinese market by messaging around teaching programming skills or enhancing spatial abilities.

Another place where these orientations have been useful is in developing design personas. Anne and Thérèse created participant profiles for all child and caretaking parent participants, including their individual play orientation mapping. This has helped design and development teams in thinking more critically about who they are developing their smart toy products for, and what matters to them.

The vectors identified from the qualitative portion of the ethnographic work could also be used to develop quantitative market segmentation, although to this point the vectors have not been used that way.

## **A Gender Story**

**Gendered Play Patterns** – Perhaps the biggest story to come out of the ethnographic research, both qualitative and quantitative, relates to gender differences in play, toys owned, and play preferences. Gender differences in play have long been of interest to developmental psychologists and anthropologists. Because many play activities are practice for becoming functioning adults (e.g., playing house, doctor, etc.), one gets a distilled view of cultural beliefs related to gender roles in observing children’s play. Beyond imaginative games, looking at what toys are played with, what toys parents encourage, and other play activities deemed appropriate for children of each gender gives additional insight into expectations of what boys and girls will grow up to be. Lise Elliot, neuroscientist and author of *Pink Brain, Blue Brain* (2009) asserts that differences in girl and boy play are very small at birth, beginning to differentiate observably around the 18-month mark. She argues that biology accounts for some of the difference, but that cultural constructs of gender, and the resulting toys children and games children are encouraged to play with are additional reasons the gap widens so much as children age.

Anne and Thérèse sought to understand better how the toys children played with at a young age relate to the kinds of interests they develop in late childhood. While unable to get a definitive answer without a longitudinal study of the same children, the researchers documented the widening gap between toys played with in early childhood and interests in later childhood.

In all three countries the gap is evident, although somewhat less so in China—perhaps because of the strong emphasis on educational toys for both boys and girls. In addition to looking at the relation of toys owned to interests developed, Anne and Thérèse were interested in learning more about how girls and boys play with the same category of toy. LEGO was the most pervasive toy played with across all three cultures, providing interesting comparative data for boy and girl play.

The index number represents the relative likelihood that a boy will have an interest or own a toy compared to the overall average (boys and girls). 100, is the average, represented by the mid-line.

Looking at USA, first data points— younger boys are about 21% more likely than the overall average child to have a robotic toy, and older boys are about 78% more likely than average to have an interest in robotics.

Above average = more boy oriented

- USA kids ages 8-18 interests
- USA kids ages 3-7 toys
- GER kids ages 8-18 interests
- GER kids ages 3-7 toys
- PRC kids ages 8-18 interests
- PRC kids ages 3-7 toys

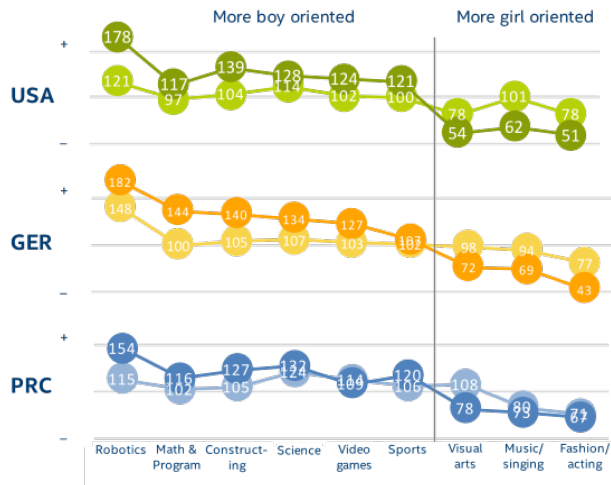


Figure 6. Data suggests that there is a relationship between the types of toys played with in early childhood (ages 3 to 7) and the interests one develops in later childhood (ages 8 to 18). We did not classify toys as more girl, or more boy oriented. This designation fell out of the quantitative data analysis; if a toy type (e.g., robotics) were owned by, or of greater interest to, boys than to the overall average (both boys and girls taken together), the index score was over-indexed (above 100). Scores above 100, therefore are by definition more boy-oriented, scores under 100 more girl oriented.

**LEGO story** – Parents in all three countries express beliefs that LEGO play provides important foundational skills. They encourage both their boys and girls to play with them. However, what “play with them” means varies from household to household and from culture to culture. Some parents express a desire for their children to play freely with LEGO, not using any kits, just building things from their imaginations. This view is more common in the US than in either Germany or China, where kit building is favored, and the children build LEGO under more guidance. In China, a couple of children even attend LEGO classes where instruction, assignments, and grades on execution is given to them. In all three countries, girls play almost exclusively with LEGO Friends, a line of LEGO designed for and targeted to girls. Boys build any one of the many hundreds of choices marketed to them.

The “boy-oriented” kits, like Mindstorms, Technic, Creator, Star Wars or Ninjago, lines range from simple to complex, some requiring adult help, something that many fathers enjoy doing with their sons. Only a couple of fathers in the participating households play LEGO with a daughter, and no mothers we interviewed or surveyed express an interest in playing LEGOs with their daughters. Boys have much larger and extensive collections of LEGO than do girls, and, in general build things that are more mechanical in nature, some with moving parts and functions. Girl-play with LEGO Friends is narrower, less about building and more about social play. Most of their kits are for building domestic and recreational scenes that they can put their “friends” into, like a dollhouse. A couple of girls that the researchers spoke with said that for them, it is about “collecting friends” and competing with their real-world friends to see who has the biggest collection of friends and kits. While some boys engage in character play with structures they build, it is less common.

Anne and Thérèse found these differences in LEGO play striking. Other researchers have found similar results (Black et al., 2016). Was it that girls are not innately interested in

building cool things with moving parts, or is it that the kits that are created and marketed to them feed into pre-defined notions of what girls like? Probably a little bit of both.

### **ACT III: FINALE—WE REAP WHAT WE SOW—NARRATIVE SHIFT**

From their research, Anne and Thérèse wanted to drive home a key message to their Intel colleagues and to toy and tech industries. It goes beyond tactical application of findings to specific business and design questions. The message is that if we do not expose boys and girls to the same types of toys, and teach them the same foundational skills at an early age, then girls will not have the opportunity to develop the requisite interests, and consequently, are less likely to develop parity in STEM fields. From previous work (Faulkner and McClard 2014) on girls and women tech makers, Anne learned that many women come to “tech-making” through the arts. ChildsPlay and some of Thérèse’s previous research (Dugan, 2012; Dugan, 2008) combine to show that the story starts at a much earlier age. Many women in the tech industry today describe growing up in households with STEM professional parents, fathers and mothers who took active roles in their play, encouraged them to make things and to develop interests in science and technology (Wittemeyer et al., 2014) from the beginning. While the industry can’t control parental influence, it can control marketing messages around the products they sell, and it can design toys that will appeal to girls, engendering an interest in STEM.

Anne and Thérèse witnessed a shift at Intel in what their teams worked on, and how they thought about toys aimed at girls and boys. Several “maker” toys aimed at girls emerged, and Intel became involved in a cross-media effort around a Netflix show aimed at tweens and teens that features smart and cool girls (projectmc2.com). What had been a non-topic for many, gender, became one that was at a minimum now considered in development projects. Intel brought more women into the development process. Teams working in the toy space began to consider how one might engage girls at an earlier age with making and technology, including the development of smart programmable toys that would appeal to girls’ already-established interests in non-tech creative making. Furthermore, the fact that Intel could demonstrate a broader understanding and expertise of toys and play in cultural contexts gave the business credibility, fostering partnerships with companies that develop smart toys. Thérèse and Anne have presented their research findings at a major toy conference, to toy manufacturer partners, and to various academic audiences, and find that people are hungry for the kind of data this research generated. Using an ethnographic approach and looking at play from a broad cultural perspective was critical to the project’s success, and in changing the narrative around smart toys and play within the company.

**Anne Page McClard** holds a doctorate in cultural anthropology, and has worked in the technology industry for more than 20 years. Anne uses ethnographic research to influence and drive product design and strategy, in both consumer and B2B markets. Throughout her career, she has sustained an interest in gender issues in academia and technical industries.

**Thérèse E. Dugan** is a child-computer interaction expert who works at the intersection of future technologies, education, and entertainment. She has a PhD in Learning Science and Human Development and over 15 years of experience as a cross-disciplinary scholar, researcher, artist, user experience researcher, product designer, and teacher.

Acknowledgments – We would like to acknowledge the following people at Intel Corporation for their support and contributions to the ChildsPlay research project: Paul Sorenson, (NDG, sponsor), Mark Francis (NBI, sponsor), Glen Anderson (Intel Labs, collaborator), Ranjeeta Singh (IOTG, collaborator), Rajiv Mongia & Lisa Mauney (PERC, collaborators), Rhonda Rosales & Wayne Grant (Intel Education, collaborators), and Jason Coston, Brenton Lyle, & Michael Cai, (INTERPRET, LLC, external research partner). We would also like to thank Eric Arnould, our EPIC session lead, for his thoughtful comments and thorough editing.

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