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"Because we are all people": outcomes and reflections from young people's participation in the planning and design of child-friendly public spaces

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ABSTRACT

Child-Friendly Cities were conceived as a means to integrate children's rights into city decision-making and governance. Participatory research about child-friendly cities consistently finds overarching themes across ages and regions: children desire access to services, nature, and play; freedom from physical danger; and opportunities for inclusion within the city. This article explores a two-year visioning and participatory design process that engaged approximately 225 young people, aged 4–16, in the planning and design of a prominent public space in the City of Boulder. While participatory research with children has received much attention in the academic literature, much less attention has been given to what can be achieved through sustained integration of children into municipal planning processes, particularly in the USA. This paper thus moves children's participation beyond rhetoric and into the challenging reality of planning a city with children as a valued constituent.

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Introduction

Child-friendly cities embody the ideas set forth in the United Nations Convention on the Rights of the Child (UNICEF 2014). Child-friendly cities help fulfil children's rights within cities, including access to a safe and clean environment, basic health services, education, green spaces for plants and animals, and opportunities to meet friends and play (Chawla 2002, Malone 2006, Carroll *et al.* 2011, Broberg *et al.* 2013, Ramezani and Said 2013, Smith and Kotsanas 2014, Derr and Kovács 2015). They also support young people's participation in community planning and decision-making about issues that affect their lives (UNICEF 2014). In child-friendly cities research, children have also expressed interest in opportunities for active care and stewardship of places within their cities (Chatterjee 2005, Malone 2013, Derr and Rigolon in press) and for integration into public spaces, where they can be welcomed and express themselves freely (Chawla 2002, Malone 2006, Bourke 2014, Breitbart 2014, Hart 2014, Derr and Kovács 2015). This paper will explore how child-friendly cities contribute to inclusive public spaces through a case study of participatory planning with approximately 225 children and youth, ages 4–16, in a 2-year public space redevelopment project in the City of Boulder, Colorado, USA. It describes both tangible and intangible outcomes from the project and reflects on approaches and challenges for integrating children's voices into municipal planning processes. While participatory research with children and youth has been much theorised (e.g. Kindon *et al.* 2007, Tisdall *et al.* 2014, Wyn and Cahill 2015), relatively few studies demonstrate models for young people's active participation in municipal planning processes across multiple ages and extended time periods, particularly in the context of the USA. We know of no other city that

integrates children into urban planning processes across multiple sectors in perpetuity. This paper thus helps move participation beyond rhetoric and into the reality of planning a city.

Children, young people, and inclusive public space

As the world's cities become increasingly urban and dense, scholars have scrutinised the allocation and inclusivity of public space. Concerns include diminished resource allocation for creation and maintenance of public spaces (Day and Wagner 2010, Hernández Bonilla 2010, Jung 2014), shifts in social interactions within public space (Madanipour 2010), equitable access to green space (Rigolon and Flohr 2014), and planning for shifting demographics and diverse needs and interests (Day and Wagner 2010, Hernández Bonilla 2010, Madanipour 2010, Main 2012, Jung 2014). There is also evidence that children and youth are becoming less tolerated within public spaces (Day and Wagner 2010) and marginalised in public processes (Vivoni 2013). The creation of urban public spaces is a social process, often requiring negotiation of ideas and resources (Jacobs and Appleyard 1996). Inclusive processes that involve participation of diverse stakeholders can help address concerns for equitable and socially just urban development (Carroll *et al.* 2011; Mueller and Dooling 2011).

Hadfield-Hill (2013, p. 355) suggests that children "are part of the present system; they are part of households, families, friendship networks, consumers, and communities. Therefore it is necessary to examine their knowledge, actions, and desires regarding their local and global environments". Advocates for children's participation have similarly suggested that children should be viewed as current citizens, capable of and interested in having a voice in decisions that affect their lives. Inclusion matters for the often-cited impacts it has on young people and the development of an informed and engaged citizenry (Carroll *et al.* 2011, Chawla 2002, Freeman 2006, Hart 2014). Just as importantly, children's participation can also make planning processes better, infusing creativity and fresh perspectives into design (Cilliers and Timmermans 2014, Parnell and Patsarika 2014, Derr 2015), and can extend the inclusion of children to the consideration of all ages and species (Derr and Rigolon in press). Children seek inclusive public spaces for all ages, ethnicities, and interests (Derr *et al.* 2013) and express a desire to enhance and care for nature and the built environment within public spaces (Freeman and Tranter 2011, Malone 2013, Vivoni 2013, Derr and Rigolon In Press).

Children as social agents in participatory planning

Participatory planning is considered essential to sustainability (Mueller and Dooling 2011) and the transformation of power relations (Kindon *et al.* 2007). In efforts to achieve sustainability and equity, children's participation has been institutionalised at multiple scales, from municipal governments (Derr *et al.* 2013, Blanchet-Cohen and Torres 2015) to national policies (Freeman *et al.* 2003, Percy-Smith and Thomas 2010) and international conventions (United Nations 1989, Malone 2006, Percy-Smith and Thomas 2010). Importantly, when asked, children *want* to participate, to be heard, and to have positive influences on their communities (Chatterjee 2005, Chawla 2009, Malone 2013, Derr and Kovács 2015). Freeman *et al.* (2003, p. 53) suggest that participatory planning with children remains a field that is often "neglectful of young people's needs and desires despite the intended goodwill of the professionals involved". And so, despite the good intentions of many seeking to empower children as social agents, there are currently more critiques than successful models.

In particular, efforts to achieve authentic participation in urban planning have received extensive critiques for their potential manipulation of participants and continuation of hierarchical power relations (Arnstein 1969, Vivoni 2013, Bosco and Joassart-Marcelli 2015), with many offering mechanisms to strengthen the process (Lansdown 2010, Percy-Smith and Thomas 2010, Mason and Hood 2011, Kraftl 2013, Vivoni 2013, Bose and Horrigan 2014). Proposed approaches to acknowledge and minimise power relations include those that support information sharing (Pretty *et al.* 1995,

O’Kane 2000), dialogue and listening (O’Kane 2000, Christensen and Prout 2002, Moss 2006, Barrow 2010), and reflection and action (Chawla *et al.* 2005, Chawla 2009).

Moss (2006) suggests that while there is much evidence of changes in the rhetoric surrounding children’s rights to participate, there is little concrete evidence that shows how participation is enacted in reality (also Freeman *et al.* 2003). One approach to children’s participation has thus been to “spatialise” children’s experiences, or to locate them within specific social and physical contexts (Day and Wagner 2010, Farrugia 2015, Wridt *et al.* 2015). This spatialising recognises that different cultures and physical contexts contribute to the social construction of childhood and youth and address unequal distributions of power (Farrugia 2015).

The work presented in this article is similarly contextualised within a specific place and social, cultural, and institutional context, and is based on a long history of participatory practices that seek to achieve this (Chawla 2002, Malone 2006, Blanchet-Cohen and Torres 2015). This paper addresses the gap in the enactment of participation identified by Moss (2006) and Freeman *et al.* (2003) by examining how participation is enacted in a city which has embedded participatory planning with children into its democratic processes. This research thus has applications to children’s perspectives on inclusive public space, as well as to other municipalities interested in effective participation with children and youth.

Growing Up Boulder – a child-friendly cities initiative

Growing Up Boulder (GUB) is a child-friendly cities initiative that began in 2009, as a partnership between the City of Boulder, Boulder Valley School District, and the Children, Youth and Environments Center for Community Engagement housed in the Environmental Design Program at the University of Colorado. GUB combines the rights-based focus of the United Nations Convention on the Rights of the Child (UNICEF 2014) with the participatory approach of Growing Up in Cities (Chawla 2002, Malone 2006). Today the partnership involves the city’s departments of community planning, housing and sustainability, parks and recreation, open space and mountain parks, and transportation, as well as other departments that engage in project-specific processes. GUB also works with other youth-serving organisations to extend its scope and reach. GUB seeks out specific youth-serving partners for projects so that they align with curricular or programme goals. While GUB believes that all children and youth have the right to be heard and included in civic processes, the partnership gives special focus to increasing the voices of Boulder’s least heard youth, typically children and youth from low-income, recently immigrated, or ethnic minority families. University interns, typically from the Environmental Design program, are also an integral part of the process; interns draw on their design skills to work directly with children, prepare outreach materials, and integrate ideas into reports (Derr *et al.* 2013).

GUB works within a Participatory Action Research (PAR) framework (Kindon *et al.* 2007). The initiative has taken many approaches to participation, but most projects emerge from the city’s planning needs and timelines. Frequently, the city identifies projects and GUB staff and partners create a project-specific approach to participation. While many projects are adult initiated, co-learning between children and adults is a primary goal in GUB’s approach to participatory research (Kindon *et al.* 2007). In this sense, GUB embraces the “beautiful messiness” of a co-learning partnership (Porter 2015, p. 411). Teachers, students, researchers, and facilitators adopt a co-learning PAR framework. The GUB team of staff, faculty, and undergraduate and graduate students collaboratively develop a PAR curriculum in partnership with teachers. One GUB faculty member and one staff person serve to co-coordinate the process. The GUB team then works with children or youth in classroom or after school programme settings in collaboration with teachers or youth leaders. This was the context for initiating an exploration of Boulder’s Civic Area and its potential for redevelopment into a great public space. GUB employs many of the original methods employed by Growing Up in Cities (Driskell 2002) as well as others drawn from current participatory practice (Derr *et al.* 2013, Derr and Kovács 2015). Like many PAR projects, GUB has found that media-based methods, such as

photography and art, combined with curricular activities that increase student knowledge about a specific planning topic, actively engage participants, promote dialogue necessary to understand children's desires, and help us to "transform unequal power relations" inherent to public processes (Kindon *et al.* 2007, p. 18).

Boulder Civic Area

Project context

In 2012, the city began a visioning process for a major redevelopment of Boulder's Civic Area. This area just south of the city's downtown includes the main public library, municipal buildings, Boulder Museum of Contemporary Art, a seasonal farmer's market, and a central park and greenway that extend along Boulder Creek. The goals of the redevelopment included developing an urban design vision for public and private spaces, guiding decisions for buildings in the creek's high hazard zone, and exploring potential uses for recreation and culture (City of Boulder 2013). Guiding principles from the Vision Plan included provisions for outdoor nature and culture, celebration of Boulder's history and assets, and community activity and arts (City of Boulder 2013). In 2014, the city moved into a site planning phase, engaging the community and a design firm in public meetings and a design workshop. Citizens of Boulder passed a tax initiative that will provide \$27 million to enhance community spaces and support cultural projects, including spaces within the Civic Area (City of Boulder 2015). During this same timeframe, GUB worked with approximately 100 students (ages: 8–16 years) to develop design recommendations for the "park at the core", a central space along the Boulder Creek that includes the library and municipal buildings (Figure 1).

Methods of engagement

In 2012, GUB's team of faculty, staff, undergraduate and graduate student interns, and partner teachers worked with approximately 125 young people (ages: 4–15 years) as part of the city's visioning

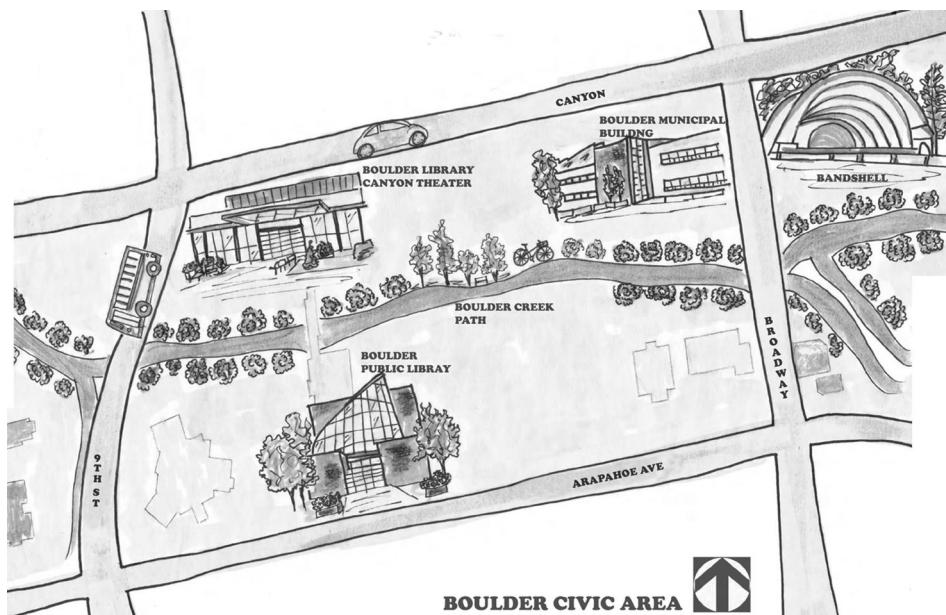


Figure 1. Map of Civic Area.

process. Young people from a total of five schools and after school programmes participated in the visioning work: one after school programme (*I Have a Dream*), one pre-school (*Boulder Journey School*), one intermediate school (*Casey Middle School*), and two secondary schools (*Boulder High School* and *New Vista High School*) ([Table 1](#)). The goal for engagement was to solicit themes for the Civic Area from a range of ages, income levels, and geographic locations within the city. Methods of engagement varied, with some groups considering the project for one or a few sessions (*I Have a Dream*) and all others considering the project over a few months. [Table 1](#) summarises the specific number of students and their ages, curricular goals, and methods employed with each group. Derr *et al.* (2013) have previously described some methods and outcomes of engagement from the 2012 visioning process. Methods included drawings, photovoice and photogrids, field trips, City as Play, and presentations and dialogues with city staff and city council (Derr *et al.* 2013, GUB 2015a). City as Play is a method developed by urban planner James Rojas to unleash creativity through the use of common objects, such as hair curlers or plastic flowers, in order to make the idea of planning more accessible to everyday people (GUB 2015a). In addition, pre-kindergarten students evaluated design entries in a competition at the end of the visioning process (GUB 2015b). All ages of children and youth shared their ideas with city staff, city council, and community members through in-class dialogues and public open houses. Pre-kindergarten students also made a formal presentation of their ideas to city council ([Table 1](#)).

In the fall of 2014, a total of three partner schools participated in this phase of work: three classrooms from a single primary school, one intermediate science elective, and one secondary class. In

Table 1. Summary of engagement process and methods, 2012.

| Group | Ages and numbers of students | Goals | Methods |
|-------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-kindergarten: Boulder Journey School | Ages 4–5 14 students | Envisioning a child-friendly Civic Area | <ul style="list-style-type: none"> • Field trips • Drawings on photographs • Drawings • Presentation to city council • Participation in community meetings • Participation in design competition |
| Middle: Casey Middle School Leadership Elective | Ages 11–12 1 class, 25 students | i. Envisioning a child-friendly Civic Area ii. Flood mitigation | <ul style="list-style-type: none"> • Field trips • Photogrids • City as play • Sketch up • Digital presentations |
| Middle and Secondary: I Have a Dream Foundation | Ages 12–15 12 students | i. Envisioning a child-friendly Civic Area | <ul style="list-style-type: none"> • Field Trips with photovoice • Presentation and dialogue at public meetings |
| Secondary: New Vista High School | Ages 14–16 1 class, 24 students | i. Envisioning a child-friendly Civic Area ii. Exploring history of Civic Area iii. Flood mitigation | <ul style="list-style-type: none"> • Field trips • Photogrids • Dialogue with city leaders |
| Secondary: Boulder High School AVID Program | Ages 14–16 16 students | i. Envisioning a child-friendly Civic Area ii. Exploring history of Civic Area iii. Flood mitigation | <ul style="list-style-type: none"> • Field trips • Interviewing a family member • Photogrids • Presentation by urban designers • Dialogue with city leaders and the public |



preparation for the school year, GUB met with teachers from all schools to review themes from 2012 and to identify curricular goals for each group. Primary school students focused on culture and arts, integration with the library, and nature play. The middle school focused on ecological experiences and design, and the secondary school focused on culture, arts, and "hanging out". To facilitate young people's consideration of these themes, GUB used a variety of techniques with approximately 100 students ranging from ages 8 to 16. Methods included presentations about inspiring public spaces, field trips to the Civic Area, the personal experience and perception (PEP) technique from Co-Design (King *et al.* 1989), City as Play, photogrid, imagining public art pieces with a visiting artist, drawing, visual preference surveys, design scenario critiques, and model-making (GUB 2015a). Table 2 summarises the methods used with each group. The PEP activity involved taking children to the site and asking them to experience it with their five senses, to consider textures and moods of spaces, to attune their senses to other animals or visitors, and to describe how they move through the space (King *et al.* 1989, GUB 2015a). Primary students also made *nicho* boxes – multimedia art boxes inspired from Latin American folk art – through which students expressed what was important to them. Middle-school students also used a "picto-play" method (Dekeyser 2014), which provided graphic icons with dots that represented costs for different features. The design-scenario critiques allowed students from all grades to provide feedback about renderings

Table 2. Summary of engagement process and methods, 2014.

| Group | Ages and numbers of students | Goals | Methods |
|---------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Primary: Whittier International Elementary School | Ages 8–9 3 classes, 60 students | i. Child-friendly design of Civic Area ii. Integrating public library with outdoor spaces iii. Connecting children and nature iv. Expressing culture and heritage | <ul style="list-style-type: none"> • Drawing your ideal park • Field trips • Personal experience and perception • Public art sculptures • <i>Nicho</i> boxes • City as play • Photogrid • Design scenario critique • Model-making • Letters to city council • Presentations to city members |
| Middle: Casey Middle School Applied Science Elective | Ages 11–12 1 class, 21 students | Ecological learning spaces | <ul style="list-style-type: none"> • Field trips • Personal experience and perception • City as play • Food web game • Visual preference survey • Drawing your favourite park • Photogrid • Design scenario critique • Model-making with picto-play • Presentations to city leaders |
| Secondary: Boulder High School AVID Program | Ages 14–16 1 class, 18 students | i. Interactive art ii. Expressing culture and heritage | <ul style="list-style-type: none"> • Interactive lesson about public art • City as play • Field trips • Design scenario critique • Model-making • Presentation to city leaders |

from the design firm hired by the City of Boulder for the project. In 2014, all ages shared their ideas through dialogues and presentations to city staff and community members. GUB and city staff returned to the students in the late spring of 2015 to share “what we heard you say”, and to discuss master plan concepts and receive additional feedback, particularly in specific design details. When the city’s planning board approved the master plan, they also voted to amend the plan with GUB’s work, as reflected in a final project report.

Methods of evaluation

In 2014, all Civic Area participants completed pre- and post-project assessments drawn from the Child-Friendly City Assessment tool (IRC/CERG 2011). Due to varying degrees of participation in the visioning process, assessments were not completed in 2012. GUB staff administered pre-tests just prior to the start of the project. They administered post-tests when all outreach activities were completed in late December. The assessment included seven items that are included under the headings “participation” and “play and leisure”, as follows:

Participation 1: I help with projects to change my community.

Participation 2: I am involved in planning or decisions for the community.

Participation 3: The government asks my opinions about my life or my community.

Play and Leisure 1: In my community, I have places for play, games, and sports.

Play and Leisure 2: There are places in my community where I can be in contact with nature.

Play and Leisure 3: I know about, participate in, or observe festivals and events of cultures and religions different from my own.

Play and Leisure 4: I feel welcome to play or hang out anywhere in my community.

The assessment included a three-point Likert scale with “never true”, “sometimes true”, and “mostly true” as well as a “does not apply” option (IRC/CERG 2011). We analysed results by calculating per cent change for each response within the scale.

In addition to the formal assessment, we also asked students to informally reflect on the project: what they liked or would change. Students volunteered answers and verbally shared their ideas about the process.

What young people contribute to design

Themes from 2012

At the end of the 2012 visioning process, we grouped young people’s suggestions into six themes that represented ideas from all ages (Table 3). These themes are consistent with previous child-friendly city work, such as improving access to nature and play spaces, safety features, and opportunities to be integrated into public space. All students expressed interest in more colourful spaces and more interesting design of the physical spaces.

In their explorations, pre-kindergarteners enjoyed exploring the site and using all the area’s features for climbing and play. They were most interested in nature, and enhancing natural spaces. For example, one student said, “I saw there were butterflies. I want there to be lots of butterflies! We can just call them to come and then they will come. We can plant plants they will like and they will come”. Many of the children were interested in ducks – duck watching and designing spaces for ducks (Figure 2). Students were also interested in designs that could emphasise Boulder’s seasons. A pre-kindergartener suggested: “In the winter time when the water changes to ice, you can get on the ... ice ... and go ice skating!” Middle-school students similarly suggested an ice skating rink that could convert to a water play pool in the summer. In the design competition, pre-kindergarteners’ favourite design included a riparian restoration area and weather station, a nature play area,

**Table 3.** Summary of Themes from 2012 Visioning Process.

| Theme | Explanation | Representative examples (with age group) |
|----------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Play | Better play spaces for all ages | Sandboxes (Pre-kindergarten) More creek access and play (all ages) Better play equipment and spaces (all ages) |
| Hanging out | Comfortable seating, food stands, inviting spaces to be with friends | An interactive space that can bring all races together (middle) Incorporate the culture of the future with symbols of Boulder's Mexican-American, Tibetan-American, and Vietnamese-American (secondary) |
| Safety | Lighting and addressing concerns about homeless and transient population | Underpasses along creek path are dark, unsafe, and unwelcoming |
| Nature | Preserve and honour nature around the creek; Create more opportunities for interaction | Concerns about safety around large transient gathering spaces A duck house and duck slide (Pre-kindergarten) Butterfly habitat (Pre-kindergarten) Places for birds to play (Pre-kindergarten) Love the running water through the area (secondary) Concern that the creek fragmentation is bad for wildlife (secondary) |
| Water features | Fountains and interactive water play | Like seating areas and foliage by creek (secondary) Hills for flood protection and play (middle) More creek access and play (all ages) |
| Public Art | Interactive art; Opportunities for public displays of local art | More colour (all ages) Animal sculptures for climbing (Pre-kindergarten and middle) Light art (e.g. pulse park) (Pre-kindergarten and secondary) Graffiti art wall (secondary) |

an outdoor reading area, water and rock play areas, a mining play area, and a community garden. Children were excited about the variety of play spaces, the connection to Boulder's mining history as an integrated play space, and the variety of garden spaces (GUB 2015b).

**Figure 2.** Pre-kindergarten student drawing highlighting ducks along the creek.

Middle-school students were most focused on interactive art and mechanisms that could mitigate floodwaters along the creek. They also wanted to see more opportunities for active play, such as with zip lines or small ice rinks. Secondary students expressed concerns for safety in the area, and did not like areas that were run down or under-programmed. They thought the historic bandshell, used for outdoor performances, could be improved through programming and some redesign of the adjacent areas. While secondary students liked the creek space and the recreation it currently provides (Figure 3), they were interested in enhancing natural spaces along the creek both for the quality of wildlife habitat and for human interaction with the space, including improving sight lines through some of the dense foliage. Secondary students also were interested in reflecting the area's history, through some representation of the Native Americans who formerly lived in the area, as well as through symbolic representations of current cultures who are not often represented in public spaces (GUB 2015a). As reported previously (Derr *et al.* 2013), Boulder High School students were concerned enough about the large homeless population that GUB partnered with the class after the visioning process to learn more about homelessness and for those who were interested to help in a shelter and food kitchen.

Themes from 2014

In 2014, students developed detailed design concepts for play areas, outdoor learning spaces, arts and cultural expressions, and affordable food venue (Table 4). Primary school students expressed their desire to interact with nature through treehouses, zip lines, boat building stations, underground creek viewing tunnels, and climbable animal structures. Students imagined a boat building station where they could construct boats using natural material found near the creek, and they designed many variations of treehouses that would use leaves as roofs from the large trees themselves. In addition, the treehouses would serve as platforms for viewing the birds and touching the leaves in the higher parts of the tree. One 8-year-old particularly highlighted the importance of nature in



Figure 3. Secondary student's photograph demonstrating that they like creek play and recreation.

Table 4. Summary of Themes from 2014 Site Design Process.

| Theme | Explanation | Representative Examples (with age group) |
|------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Play | Active play | Animal statues that are safe to climb (primary) Skate park (middle) |
| Nature Play | Interacting with nature in fun ways | Athletic activities, soccer field, basketball court and football field Bird and duck feeding areas (primary and middle) Boat building station using natural materials (primary) Greenhouse library (primary) |
| Water Play | Fountains and interacting with water | Dragon that shoots out water (primary) Beach area near the creek(middle) Tunnels under the creek to view the fish (primary) |
| Treehouse | Relaxing area to view the creek | Sitting area with bean bags (all ages) Treehouses kids can climb on and view the creek from above (middle) |
| Public Art and Culture | Interactive and inspirational | Treehouses that could store books inside (primary) Quotes along the path (middle and high school) Benches with art and quotes painted on them (primary) Flags representing nationalities and cultures of Boulder (secondary) |
| Transportation | Getting to and from the Civic Center | Pedicabs (primary) Children sized B-cycles (middle) Better signage around the creek (secondary) |
| Food | Inexpensive and diverse types of food | Food carts with international flags (secondary) Outdoor seating areas with heaters (secondary) |
| Homelessness | A solution for the homeless | Sanitation station (middle) Homeless shelter (primary) |

the Civic Area. Her *nicho* box was populated with wild animals and a simple mirror. When we asked what the mirror represented, she said, “me and nature” (Figure 4). Later, when the primary students were critiquing a design scenario of a long communal farm-to-table gathering adjacent to a concrete-sided irrigation ditch, this same student said, “this is a horrible idea because it destroys the nature and is bad for our country”.

Primary students’ ideas for play often integrated nature into other activities, such as education and reading. One student proposed the idea of a greenhouse library where “maybe the books could be about nature” or the idea that every treehouse would have bean bags and a small library inside, so kids could quietly relax and enjoy a book while also having views of the creek (Figure 5). Students had no shortage of ideas for the area. Group model-building thus became an important way of setting priorities. GUB facilitators established that not all features could necessarily be placed on the site plan without a group consensus, creating a “compromise and cooperation” method that allowed for interactive dialogue within the group of primary students. With the help of primary school teachers, each class established rules for good dialogue for this process.

While middle-school students began with a focus on ecological learning and exploration, their ideas and recommendations expanded to include spaces for active play, water interaction, and a sanitation station for the homeless. Active play areas included slack-lines and small skate parks, while water interaction was represented with sandy beach-like areas near the creek, water fountains, slides for tubing and bridges with monkey bars below them. The homeless sanitation station was a proposal created by a group of students who realised during our many visits to the Civic Area, that there was a lack of shelter from the elements and a lack of “real” bathrooms stating “we need real bathrooms, not just porta potties”. Their design proposal was a reaction to the large transient population within the area and a recognition that the area lacked basic services for this population (Figure 6).

Secondary students focused most on affordable food options, arts and culture, hang-out spaces, and flexible green spaces. Secondary school students discussed affordable food options because they only have 30 minutes to go off campus for lunch, and there are limited food options within walking distance. Access to food and hang-out spaces were integrated, with recommendations for food



Figure 4. One primary student's "Me and nature" *nicho* box showing the importance of nature, with animal figurines and a mirror to represent the child.



Figure 5. Primary student design recommendation for a treehouse with bean bags, books, and a view of the creek.

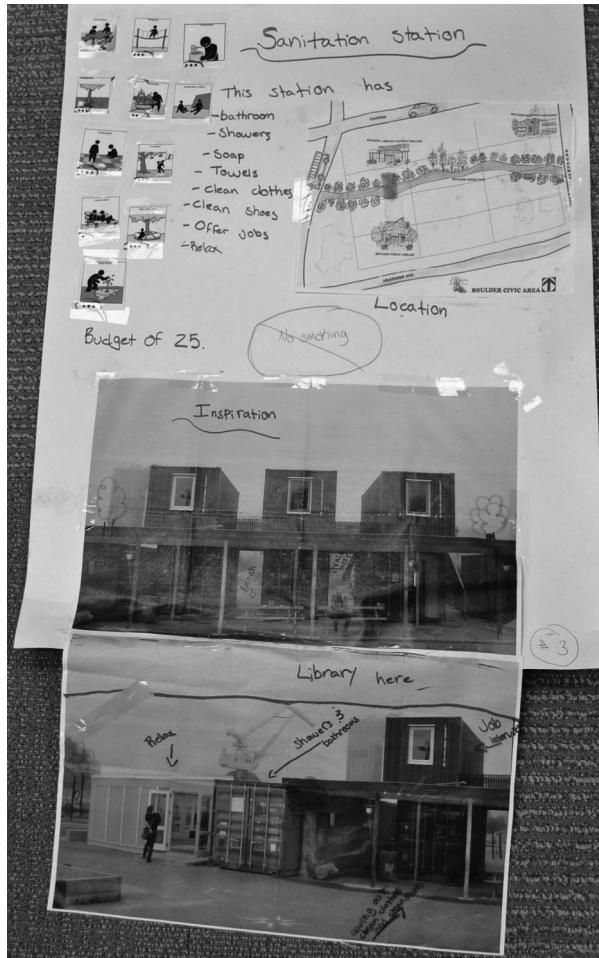


Figure 6. Middle-school student's initial concepts for a "sanitation station" for the homeless.

trucks, food stands, picnic tables, and covered seating. Secondary students expressed ideas for arts and culture through use of world flags or cultural quotes along walk ways, a performing arts stage, a sculpture garden and an inspirational chalkboard that people could write on. The flexible green space would provide opportunities for activities such as soccer or summer movie nights. Secondary students also made clear that they wanted play areas are for all ages, including themselves. In their final reflections at the end of the semester, they wanted to make sure that we remember that "tree-houses are for teens too!" (Figure 7).

Common themes across time

Common themes across both periods of engagement include nature play and enhancement, active play, increased sight lines across the creek, creek access, integration of seasonal activities, art and cultural representations, and spaces to hang out and eat with friends (Table 5). During this process, young children tended to focus on their physical environment and the animals within it; older children and youth expressed interest in the physical environment, and the social interactions that occur there. Children of all ages emphasised the importance of maintaining and enhancing nature within the public space.



Figure 7. Secondary student model showing food carts and hang out spaces.

While themes across time did not change much, students in 2014 added details, with specific visual representations for treehouses for reading, benches with cultural quotes, or a detailed representation of water play. When secondary students presented their work to the city, staff were excited about many youth recommendations, stating, "We can incorporate many of these ideas in the coming year!" Not only were most ideas practical and feasible, but they also were ideas that adults might not have come up with on their own, such as treehouse book nooks, climbable animal sculptures, or a chalk art wall. The process of comparing themes brings to light young people's desire to create places for all ages. All ages of children and youth thought about other age groups, both younger and older, creating designs that reflect inclusive thinking.

What young people gain from the process

Participation measures

Based on the child-friendly city assessments, young people in 2014 were most impacted by participation measures, especially being heard by city government. Students of all ages expressed consistently large gains in their feelings of being heard by the government, with a 375–700% increase in the number of responses for "sometimes true" or "mostly true" (Table 6). Students also showed large

Table 5. Common Themes, 2012 and 2014.

| Theme | Examples from 2012 | Examples from 2014 |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Change of seasons | Ice rink over the creek (pre-kindergarten and middle) | Trampolines representing autumn leaf colours (primary) |
| Wildlife Habitat and Viewing | Butterfly and duck habitat (pre-kindergarten) | Bird feeders, underwater viewing areas (primary) |
| Water interaction | Water play pool (middle) | Beach-like area near creek (middle) |
| Representation of cultures and interactive art | Recognize Native American histories within the Civic Area (secondary) Recognize Boulder's current cultures, such as Mexican- Tibetan- and Vietnamese-Americans | Benches with international quotes, steps that shoot out paint (primary) Graffiti wall (middle) Cultural walk with poems in different languages, inspirational chalk art wall (secondary) |
| Creek visibility | Remove dense foliage (secondary) | Raise tree canopy (primary) Zip lines (middle) |
| Solutions for the homeless | Soup kitchen (secondary) | Homeless sanitation station (middle) |
| Hang out spaces | Benches, tables, comfortable places to hang out, and food stands (secondary) | Picnic tables near food trucks (secondary) Treehouses with bean bags and books (primary) |
| Place for all ages | A play space for all ages (secondary) | Playground for "babies" (primary) |

Table 6. Per cent change in responses to the question, "the government asks my opinions about my life or my community".

| | Primary (%) | Middle (%) | Secondary (%) |
|----------------|-------------|------------|---------------|
| Does not apply | -25 | -100 | 0 |
| Never true | -48 | -64 | -76 |
| Sometimes true | 333 | 80 | 106 |
| Mostly true | 350 | 700 | 20 |

increases in positive responses to feeling that they participate in planning or decisions for the community, with a 126–780% change (Table 7). We attribute such large gains in these measures to both the overall process of engagement in which students feel directly heard, as well as the direct interaction between young people and city staff and leaders. Previous projects that have not provided these direct interactions showed no gains in this measure (Derr and Kovács 2015). The project also positively influenced students perceptions that they help with projects to change their community (Table 8). All ages valued the opportunity to share their ideas with the city. In their final presentations, one middle-school student offered that she liked that they were able to "share our ideas with the city to make the civic area a better place for people".

In anonymous reflections on the process, secondary school students said they appreciated the opportunity to contribute to their community. One stated, "I learned that my voice/input is important, and our community cares about the youth". However, in the comments section for assessments, one intermediate school student also wondered how representative this project was of their overall experience as young citizens by writing: "Well, they just did [ask our opinions], but I don't know if I'll ever have that opportunity again". While expressed by only one student, this reflects a significant need to provide more and better communication about how the city is including children and youth perspectives in decision-making.

Play measures

Among the questions regarding access to play, the project least influenced perceptions about access to nature. This was consistently high both before and after the project, with some movement towards more positive rankings. Similarly, students felt that they had access to places for play, recreation, and sports. However, some students expressed a decrease in this feeling. This decrease was most dramatic for the middle-school students, who had reluctantly stopped taking their weekly field trips to the Civic Area and creek in order to build models and prepare presentations. These shifts also

Table 7. Per cent change in responses to the question, "I am involved in planning or decisions for my community".

| | Primary (%) | Middle (%) | Secondary (%) |
|----------------|-------------|------------|---------------|
| Does not apply | -67 | -100 | 0 |
| Never true | -62 | -64 | -76 |
| Sometimes true | 5 | 80 | 106 |
| Mostly true | 238 | 700 | 20 |

Table 8. Per cent change in response to the question, "I help with projects to change my community".

| | Primary (%) | Middle (%) | Secondary (%) |
|----------------|-------------|------------|---------------|
| Does not apply | 0 | -100 | 0 |
| Never true | -63 | 0 | -80 |
| Sometimes true | -24 | -29 | 60 |
| Mostly true | 81 | 200 | -20 |

could be attributable to the changing seasons from autumn to winter, with days getting colder, darker and snowier, and subsequently with more time spent inside. Or it may reflect a realisation that there could be even better play spaces, as students explored exemplary parks.

Inclusivity measures

We included the question about opportunities to experience other cultures and religious events because we planned to focus on culture and arts within the project. Primary students showed a 99% shift towards more often feeling that they had these opportunities (Table 9). In contrast, middle and secondary students moved in the opposite direction, with many more students saying this was "never true" or "does not apply" (Table 9). Primary students were the only students who constructed *nicho* boxes and exhibited them at a school Heritage Night. In the words of one primary student, "My favorite activity was the *nicho* boxes, because I got to express myself". In contrast, secondary students considered culture but only incorporated these ideas into their recommendations, and middle-school students, with a focus on nature and ecological play, did not have structured opportunity to express culture at all. While each classroom had opportunities to share their own values and interests, such as through the City as Play method, the *nicho* boxes may have created a more intentional and obvious expression and appreciation for other cultures and experiences.

Finally, students reported mixed results in their feelings of being welcome to hang out or play anywhere in their community (Table 10). As with access to play spaces, these results may reflect shifts in seasons, with students going out in the community less in winter weather and therefore experiencing welcoming spaces less often, or it could be a reflection of examining other places in the world that celebrate or welcome youth in public spaces. Middle-school students also experienced two separate occasions where they did not feel welcomed in the civic area. In one instance, rambunctious students arrived at the creek and disrupted a group of ducks. Another group of visitors were upset with the youth that they had scared the ducks away. Later on this same day, students were tossing rocks into the creek and a fisherman asked them to stop. When students worked on their design recommendations, some suggested that there might be different zones of use, those for quiet and contemplative activities, such as nature watching and fishing, and others for more active and interactive play in the creek.

Breitbart (2014, p. 179) discusses how the process of rethinking a public space can "illustrate the inadequacies of public space, ignite a desire for something different, and revive the spatial and social imaginary". Heightened awareness among the students could account for the negative direction of some assessment items.

Process of engagement

In both 2012 and 2014, GUB staff also asked students to informally reflect on what they liked about the process. In general, students liked the more interactive methods, such as model-building, *nicho*

Table 9. Per cent change in responses to the question, "I know about, participate in, or observe festivals and events of cultures and religions different from my own".

| | Primary (%) | Middle (%) | Secondary (%) |
|----------------|-------------|------------|---------------|
| Does not apply | 0 | -100 | 20 |
| Never true | -50 | 50 | 260 |
| Sometimes true | 17 | 43 | -4 |
| Mostly true | 82 | 0 | -40 |

Table 10. Per cent change in responses to the question, "I feel welcome to play or hang out anywhere in my community".

| | Primary (%) | Middle (%) | Secondary (%) |
|----------------|-------------|------------|---------------|
| Does not apply | 0 | 0 | 0 |
| Never true | 50 | 10 | 0 |
| Sometimes true | 0 | -56 | 100 |
| Mostly true | 3 | 50 | -50 |

boxes, interactive art models, field trips, and presentation boards. Both middle and secondary students also enjoyed the group work and opportunities for peer-to-peer dialogue. These results are similar to previous GUB work (Derr *et al.* 2013, Derr and Kovács 2015). In fact it may be that learning to negotiate diverse ideas among peers is of equal if not greater significance to young people than sharing their ideas with the city. This was true for primary students who worked on single models for a neighbourhood design (Derr and Kovács 2015). Hart (2014, p. 125) similarly reflects on the need for young people to interact among peer groups as well as with adults and professionals, stating, "the child-to-child dimension seems to have been greatly under-recognized and under-theorized".

Parnell and Patsarika (2014, p. 103) add the dimension of *playful voice* to the importance of peer-to-peer and child-adult exchanges. Participatory design processes can offer young people opportunities to interact with their peers and friends in contexts outside the curricular norm. The collaborative fun that ensues can be reason enough for young people to enjoy the process. This process extended to include playful relations with adults as well:

Students valued the opportunity to share a joke with those involved, suggesting an inclusive sense of fun and the importance of playfulness in building positive adult-child relationships within participatory contexts.

Hart (2014, p. 136) reflects on how we develop children as citizens:

Finding ways to enable children to be critically engaged in the development of their communities, to play a greater role in the governance of their everyday settings and to play cooperatively in inclusive public spaces involve a broadening of our view of children's citizenship. These three areas offer authentic routes for building a more participatory and just civil society.

Colin Ward believed that "real change involves opening the minds to rich and achievable alternatives" (as cited in Breitbart 2014, p. 179). The young people involved with the Civic Area project showed no shortage of ideas for imagined alternatives. One of GUB's greatest challenges may be in how to account for and accommodate the variety of ideas young people generate through such a process. Because of the importance of ensuring the translation of young people's ideas into plans, GUB has taken the advocacy role of participatory researchers seriously, providing feedback on multiple plans, taking plans back into classrooms and to focus groups, and communicating on an on-going basis with city staff.

Integration of young people into city planning

Over time, GUB has learned that effective participation often involves going to the places where young people gather (such as schools or after school programmes) (Derr *et al.* 2013). While there are times when students participate in public meetings or city council sessions, they are most

comfortable in their home terrain, and more freely and actively participate in this realm (Derr *et al.* 2013). Dialogue is frequently cited as a benefit of participation (Chawla 2009, Hart 2014) and a method within PAR (Kindon *et al.* 2007). GUB has found this to be significant in influencing young people's feelings of being heard by government (Derr and Kovács 2015) but also in influencing the thinking of city representatives. This latter impact emerged in two separate contexts during the course of this project. First, the Executive Director of Community Planning and Sustainability reflected about pre-kindergarten participation in the 2012 visioning process:

When preschoolers came and spoke about the civic area, it had a huge impact. In some ways their input was quite simple, but these are the people who are going to be here. So even if we don't build a glass bridge for the ducks, the process has developed a certain amount of buy-in and ownership. They like to come down and see the ducks ... and we need to remember not to take that away as we design things.

This is one example of many that GUB staff have witnessed in which city staff are left with a particular impression of children's ideas. These typically emerge from direct contact between children and city representatives rather than from reports or physical representations of ideas. In the Civic Area project, one of the parks planners who was new to the project went with GUB staff to the primary and secondary school classroom to present their plan and renderings and receive feedback. What was most noticeable was not the dialogue of the children and planner (which was positive and constructive), but that as we moved from one class to the next, the planner adapted his language and ideas, integrating more of the students' ideas into his presentation as he proceeded. The process allowed for many of the methods that are considered significant in shifting power dynamics with children – information sharing, dialogue and listening (O'Kane 2000, Christensen and Prout 2002).

In a separate exchange, one group of middle-school students particularly impacted a parks planner. This group presented their ideas for a "sanitation station" that would provide washing and clothing facilities for homeless residents who spend much of their day within the Civic Area. This group chose to use 25 of their 30 budget "dots" to provide services for the homeless and transient populations. (The remaining five were reserved for "emergency".) In an overview of their project to city visitors, the group said they wanted to provide these services "because we are all people". When the planner came back for a more focused conversation with this group, he started by saying, "I really liked what you said, 'we're all people' ... because it is really true". He went on to describe how the city had similarly been thinking about creating a staffed washing space within the civic area for people without homes, but also for others such as bike commuters and creek players. At additional meetings, he referred back to this group of students, reflecting not only on the concrete idea but also on the importance of GUB's work in fostering the development of a caring citizenry. City staff repeatedly share their feelings that young people are perhaps most adept at considering the rights of all residents within the city. Whereas adults often attend meetings in order to share their personal positions, young people consider the needs and desires not only of themselves but also of animals, other age groups, and the homeless. These examples help show the importance of personal dialogue for city representatives. It is through these encounters that children best express their ideas, hopes, and values, and these often become the ideas that planners remember and refer to as they move projects forward.

The Civic Area project also represents a process of growth and development among GUB partners. As one example, the middle-school teacher, GUB staff and interns discussed this same sanitation station at an early stage of its development. Because the idea did not fit with initial project goals, we wondered if we should support the students' further development of the station concept. After discussion, the adults decided to encourage them to continue because it reflected their ideas and vision for the civic area, even if this differed from original city goals. The youth and adult partners were all validated in this decision in seeing the park planner's response and encouragement of the group's ideas.

A second area of growth was when the initial design competition criteria were published. In reviewing the criteria, GUB staff became concerned that young people's ideas were not adequately

incorporated. City staff had linked GUB's work on the city's website but had not formally included integration of young people's ideas as a formal criteria in the design competition. City staff felt that they were being inclusive. Both GUB and city staff were able to talk about ways to better integrate young people's ideas into the process and to learn some of the challenges in being truly inclusive. In the end, not only did the winning design entries incorporate young people's ideas, but pre-kindergarten students also were among the competition's judges. The pre-kindergarteners and city staff agreed on the top two entries in the competition. This example speaks to the importance of dialogue, not only peer-to-peer and child-to-adult, but also among GUB partners, so that the city as a whole can make progress towards its vision to become an exemplary child-friendly city.

As a further expression of this growth, when the city began preparations for the 2014 planning phase, they developed a short informational video about the Civic Area (City of Boulder 2015). Set in the future, with the Civic Area development completed, the two minute video presents different voices from the city's population expressing what they love about the Civic Area. Many of the ideas in the video emerged from the 2012 visioning process, including ideas from youth. As the video comes to an end, an adult who was ostensibly a child at the time of planning the Civic Area, says, "I'll never forget when I went to city hall, presenting our ideas for the Civic Area. Who would have believed that one day, all this would be real? We were heard!" This level of youth inclusion, in promotional materials and in the city's public presentations in 2014, helps to validate that GUB's work is an integral part of the city's planning processes. If this video were to occur alone, it could be construed as tokenistic, but as the planning director stated:

I love the fact that on a fairly regular basis, we've got young people's perspectives, whether it's at a council meeting or a special community workshop, or in the [GUB annual report] ... that young people's voices are regularly coming in front of the planning board and city council.

Perhaps because of this frequent presentation of young people's perspectives, during the adoption of Civic Area plans, the planning board amended the plan to include recommendations from GUB's research with children and youth at a level of detail not yet included in the plans. In their final stages of adoption, many of the elements that children recommended were present in the plans, from a reclaimed tree house and miniature wetland to safer creek access, food trucks, and hang out spaces that are infused with natural elements. Such integration contributes to "whole systems action research", in which young people, city representatives, and partner organisations all learn from each other (Percy-Smith and Weil 2003). Shared learning provides more effective participation outcomes (Francis and Lorenzo 2006, Lansdown 2010). Cele and van der Burgt (2013) found that one of the barriers to effective participation was planning professionals' failure to understand children's competence and positive contributions. When planners and young people are brought together, not only are these ideas more likely to be integrated into final plans and places, they can also help foster the idea among planning professionals that it is not just young people who benefit from participation. The whole city can. Malone (2006, p. 21) offers further support for this in her analysis of UNICEF's child-friendly cities work, stating: "cities can never achieve child-friendly status because they will always be transforming and responding to the local and global context". Participation provides a process for all GUB partners to collaboratively reimagine the city.

This would not be possible were it not for the on-going partnership between the city, the university and the school district and youth-serving partners. Most participatory planning projects occur either by individual researchers or as individual projects (e.g. Percy-Smith and Thomas 2010). GUB consistently integrates children into urban planning processes across multiple sectors through an on-going formalised agreement. At the heart of participatory practices, whether in urban planning or research, is the transformation of power. When multiple levels of municipal government, from staff and planners to council members and advisory boards, all take children's ideas seriously, it can begin to create a culture that recognises and values differences in people. The change takes time, as evidenced by the shifts occurring within the Civic Area timeline, and transformation is not felt consistently by all youth, as evidenced by the comment made by the middle schooler that he/

she was not sure when he/she she would have the opportunity to participate again. That two students who went through the same process had such different feelings, also represents the importance not only in spatialising participation, but also understanding situational differences of individuals within a process. GUB has initiated a series of focus group sessions with youth and city planners to discuss how to communicate ideas back to youth more effectively, so that GUB can ensure, consistently and across projects, that young people are in fact influencing decision-making and plans for the city.

While methodological approaches, such as listening and dialogue, are central to effective participation, this project also demonstrates the importance of an on-going partnership that fosters shared learning across government sectors and ages of participants. The Civic Area process was effective because it engaged the city – its leadership, staff, and youth – in a serious cultural shift about how government happens. The shift has not been seamless or easy, but was effective because its leadership saw youth as legitimate contributors to public process, and adult leaders in the process were open to learning and discussion about what meaningful engagement looks like in practice.

Concluding thoughts: young people's contributions to inclusive public space

This research demonstrates both the challenges identified in previous participatory research as well as the opportunities embedded in meaningful participatory practice. GUB's approach to planning the Civic Area highlights the importance of sustained integration of children over time. Through a partnership that involves children, schools, city planners, designers, and a university, all parties learn from each other how to effectively enact participatory practice with children. Among the challenges are translation of ideas, ongoing communication about how ideas are incorporated, and the ability for young people to feel heard across the long timeframes for planning and design of a single public space. Yet the child-friendly cities framework can contribute to inclusive public spaces in two important ways: through the process of participation and through the inclusive thinking that young people bring to considering public spaces.

Through inclusion in participatory practices, children and youth have the opportunity to develop a greater sense of inclusion within the city. Not all children and youth experienced this equally; so there is more to be learned about how to effectively reach all children so that they feel heard and valued. Many planning and design processes take years to complete. Research that follows youth throughout the course of the project, not only during the participatory phases, but also that examines how information is communicated back to participants, re-visits plans with youth as they develop, and includes youth perspectives after a project is built, would help us understand which impacts – both positive and negative – are experienced over time, and how or if these evolve over the course of the project. GUB is pursuing some of these questions with high school participants through focus groups; however, a detailed longitudinal study with a broader cross-section in ages and diversity of participants would serve to deepen our understanding of these impacts.

Second, this research shows how young people are inclusive in their thinking about public space – from improved wildlife habitat to shelter for homeless, young people thought about a wide range of people and users in considering the design of public space. Another important realm of research is thus to examine how or if children actually change participatory practices within a municipality. This article reports some ways that planners believe young people influenced individual thinking, specific design elements, or the process as a whole, but a broader examination of these impacts would provide insight into how generalisable these impacts might be. Content analysis of plans and public spaces can identify specific elements that came from young people's recommendations. However, given that multiple voices are a part of any planning process, the question remains as to the direct impacts of young people's participation in the process and design.

In October 2015, members of the US Congress introduced a resolution to adopt a Children's Bill of Rights (Gutierrez 2015). To date, the USA is the only member of the United Nations that has not ratified the United Nations Convention on the Rights of the Child (Wheeler 2015). Adoption of a

Children's Bill of Rights in the United States would place greater imperative on understanding mechanisms for effective, sustained participation. Without such a framework, very few cities have chosen to invest in young people in the way that the GUB partnership does. If all municipalities were asked to undertake this work, models of best practices, as well as precautions and protections for imbalances of power would be critical.

We end this article reflecting that when we started the design process in 2014, after much open-ended work during the visioning of 2012, we thought we would focus our engagement activities on a subset of child-friendly city concepts. Because they aligned with curricular and project goals, we chose to focus our outreach on arts and culture, ecological exploration, and integration of welcoming, "hang out" places into city spaces. In the end, young people broadened our focus to include many more of the core concepts that compose child-friendly cities, such as providing basic services for the homeless, improving play and recreation spaces, or improving habitat for animals. This is an important reminder that while young people's ideas of child-friendliness may be consistent across time and regions of the world, integration of children into participatory processes is essential to create exemplary child-friendly spaces. When we tried to isolate a subset of ideas, young people broadened our focus by extending their thinking to the rights of others. In so doing, they helped remind us that the whole can be greater than the sum of its parts. While tangible outcomes are important in planning, young people repeatedly remind us, too, that the intangible outcomes are equally important. Opportunities to discuss ideas, to be heard, and to imagine a better, more inclusive and playful city, are equally a part of child-friendly cities work. When we re-initiated work on the Civic Area in 2014, GUB staff fleetingly wondered why we do this work when we receive consistent results over time. Young people presented us with the answers, foremost being, "because we are all people".

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