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Modified Social Benches: Exploring the Role of Aesthetic Interaction to Placemaking

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Abstract

This paper discusses some aesthetic and social aspects that involve interactions with urban art installations. The aim is to better understand how, and to what extent, aesthetic interactions with art installations can transform an urban space into a place. The discussion is based on a case study of the *Modified Social Benches*, a series of outdoor, interactive artworks that provide different types of bodily engagement, social encounters and aesthetic experiences. A detailed empirical analysis is carried out, emphasising the social roles around the installations as well as the most salient aspects regarding the bodily, the spatial and the experiential qualities of the interactions. The results suggest that urban installations affording playful, action-oriented and sensorimotor encounters are more effective to placemaking than installations that encourage static modalities of social activities.

Keywords: aesthetic interaction, placemaking, embodied interaction, interactive installation, social roles, engagement, play, urban space, place

1. Introduction

In the last decade the theme of embodiment has received a growing attention among researchers and practitioners from design and related fields. Research on embodiment is primarily concerned with how we use our bodies to shape the ways we perceive, feel and think [1]. A variety of disciplines, spanning from Philosophy to Human-Computer Interaction (HCI), have addressed different aspects of embodiment, and this has led to the emergence of more specific approaches. One of these approaches, known as *Aesthetic Interaction*, focuses on the experiential aspects of people's interactions with artefacts [2–5]. Emphasising the experience and the aesthetic dimension of interactions means adopting a holistically-oriented approach that considers the rich and complex nature of the whole human body—including the sensorimotor skills, the cognitive and emotional dispositions—that people use to make sense and produce meaning about an artefact, its context and ultimately about themselves.

The present discussion takes Aesthetic Interaction as a conceptual and methodological tool to analyse and better understand the process of placemaking. As a general notion, the term *place* refers to a physical space imbued with social and cultural meanings, values and traditions [6–8]. Unlike an abstract space, a place has its specific life, character, and identity, although all these qualities are more or less dynamic, that is, they may change according to the set of cultural, social, economic and political forces at play [9]. Then, placemaking can be interpreted as the process of giving life to a place, or infusing some qualities in a specific space so that it becomes a place: a spatial setting where people feel stimulated to come and to stay, where they can live a particular and enjoyable experience that cannot be lived elsewhere in the same way.

In order to analyse the relationships between Aesthetic Interaction and placemaking, this paper presents an empirical study on the series of interactive artworks *Modified Social Benches*, designed by Danish artist Jeppe Hein and installed in Southbank Centre, Central London during the Summer of 2016. The next section comprises a literature review on Aesthetic Interaction, placemaking and related concepts, bringing some relevant aspects as well as potentially fruitful connections between them.

2. Background

As the concepts of Embodied Interaction, Aesthetic Interaction and placemaking are essentially interdisciplinary, this section draws on different disciplines to outline the main characteristics of these concepts and their contributions to the study of urban interactive installations. Within the field of HCI, Dourish authored a seminal work, *Where the action is*, where he defines Embodied Interaction as “the creation, manipulation, and sharing of meaning through engaged interaction with artefacts” ([10], p. 126). For Dourish, Embodied Interaction is a valuable approach “to illuminate not just how we act *on* technology, but how we act *through* it” ([10], p. 154, emphases on original). Dourish’s position highlights the experiential and meaningful dimension of interactions: we act by means of our own bodies, and this encounter between ourselves and technological artefacts is the source of meaning. This idea of interaction as meaningful action also underpins the concept of Aesthetic Interaction. According to Petersen et al. [3], Aesthetic Interaction is about aesthetics of use, rather than aesthetics of appearance. They contend that Aesthetic Interaction involves the entire human body, that is, intellect and all the senses, aiming to create involvement, experience, surprise and serendipity in interaction [3].

The growing interest on the experiential and corporeal realms of human-artefact relationships has inspired a range of subdisciplines to emerge [5]. Especially related to the case study of this paper are the fields of embodied engagement, whole body interaction and kinesthetic interaction (e.g., [11–13]). What these fields have in common is the consideration of the interacting, living, active human body as the main source of analysis and design; such idea is opposed to Cartesian and cognitivist approaches that tend to reduce users as disembodied information processors [1, 14].

Interestingly, the main ideas and concepts outlined above have also informed research and design in Architecture. While Interaction Design takes the notion of embodiment from the

perspective of a *user in action through technology* [10], some architectural thinkers have focused on embodiment as a source of meaningful experiences of places [15, 16]. In particular, Phenomenology and Neuroscience have provided important insights to both architects and interaction designers, leading to more holistic accounts of interactions. According to these accounts, people's interactions with objects and places are as much about corporeal, tangible encounters as they are affective, symbolic ones [5, 17–21].

Several disciplines have discussed the concept of *place*—its definition, its qualities, and how it is manifested and lived. What seems to unify the understanding of place is its *human dimension*, both in an individual, subjective level, and as a shared, communal experience. Places are regarded as spatial settings that provide people with feelings of well-being, safety, security and orientation [22]. This general notion of place, and the related concept of *placemaking*, gained traction in the 1960s, through the work of Jane Jacobs and, some years later, William Whyte. For Jacobs, successful places are characterised by intense and diverse social encounters, like casual meetings and chattings, which help enhance the security of urban communities by encouraging their members to naturally engage in a dynamics of mutual surveillance [23]. For Whyte, lively places are those where people find urban amenities—such as sitting spaces, food, water features, varied shops and businesses—that make them stay and enjoy a public space in an everyday basis [24]. It follows that placemaking is about turning segregated, lifeless environments into lively, satisfying ones.

More recently, placemaking has been regarded as a collaborative process which aims to maximise the “shared value” of public spaces, by focusing on its social, cultural and physical identities [25]. The two core principles of placemaking have been summarised as (a) focus on designing cities for people; and (b) inclusion of citizens in the decision making process of design [22]. Such principles highlight the role of local communities in the planning and design of places. What makes communities key elements in the process of placemaking are their unique attributes—for example, trust and support networks, common experiences and interests, types of transactions, history and proximity [7]—attributes that, together, help to constitute and qualify places over time. In a certain sense, communities make their own places by imbuing their everyday environments with shared values, habits and identities; when “material and spatial elements are given life by the meanings, associations and experiences people inject into them during daily life” ([26], p. 141).

Urban art installations can arguably contribute to the process of placemaking by enticing a broad variety of interactions. People may interact not only with the installations themselves, but also with other people, for example, by starting a conversation prompted by the installation—the process known as *triangulation* [24]. Moreover, interactive installations can make people stay longer in the area for different reasons: directly engaging with the installation, observing it from a distance, photographing or filming the actions around them or simply talking to people nearby. Altogether, these social activities or “social buzz” [27] tend to create a very particular and lively atmosphere of enjoyment, which helps to characterise a place.

Not surprisingly, embodied, playful and aesthetic modes of interaction have been employed for many years in urban spaces, especially in the context of parks, playgrounds or seasonal initiatives such as funfairs, action- or adventure-themed events and, more recently, urban



Figure 1. Left: Charlotte Amundsens square, image courtesy of Danish architecture centre; right: *Rock Rock Around the Block*, a prototype presented at the market street prototyping festival 2016, image courtesy of market street prototyping festival.

prototyping festivals. What seems to be singular in the current turn to embodiment in Urban Design is an emphasis on the *hybridization* of concepts and typologies. Instead of discrete, self-contained facilities designed for specific publics and activities—for example, a fenced playground where children play while adults watch—a range of contemporary urban projects have assumed a multifunctional character, fostering physical activity, playful behaviour, community participation and aesthetic interactions in a more fluid, open-ended way [28].

Part of these new initiatives has been built as permanent additions to the city: such as the *Superkilen* park and the *Charlotte Amundsens square*, in Denmark, which features a rocky landscape that can be used for climbing, skating, biking or simply sitting or lying [29] (**Figure 1**, left). Other projects have been temporarily installed as part of events, such as Portland's *City Repair Project*, with its strong emphasis on community engagement for placemaking, and San Francisco's *Market Street Prototyping Festival*, in which artists and designers reinvented the concept of the urban bench by employing playful and striking forms to entice social encounters and new ways of experiencing the urban space (**Figure 1**, right).

However multifunctional, playful or enticing these contemporary projects are, they all seem to share an underlying principle: they seek to bring life to the city by proposing spatial and social experiences that are fundamentally rooted in the human body. In other words, these projects explore Aesthetic Interaction as a platform of placemaking. The *Modified Social Benches*, object of the present study, can be approached as part of these contemporary creative efforts. By extending the concept of Aesthetic Interaction to the urban scale, the following analysis aims to clarify how the bodily engagement with outdoor installations can contribute to the process of placemaking.

3. Modified social benches: a case study

This section presents an empirical study of the *Modified Social Benches*, a series of temporary, outdoor and interactive installations designed by Danish artist Jeppe Hein. The installations borrow their basic form from well-known park benches and alter their design to various degrees, transforming the act of sitting into a “conscious physical endeavour” [30] (**Figure 2**).

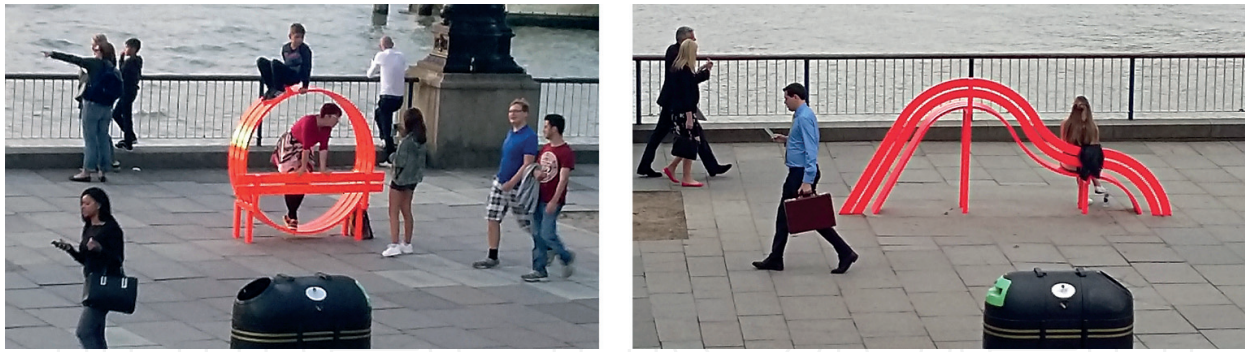


Figure 2. Two versions of the modified social benches.

Besides their sculptural quality that sparks people's attention, the *Modified Social Benches* can also be approached as a playful and performative experiment on bodily engagement and social behaviour in the urban space. By blurring the boundaries between Art, Interaction Design and Architecture, Jeppe Hein's installations offer a valuable context for analysing the process of placemaking in light of Aesthetic Interaction.

3.1. Methodology

After a bottom-up, exploratory approach of the installations in Southbank Centre, 4 out of 10 different versions of the *Modified Social Benches* were selected for this case study. The principal criteria for selecting the four benches were the following:

- a. they were installed in the same area, so all of them could be captured by a single photograph taken from a distant, inconspicuous position, as shown in **Figure 3**.
- b. the designs of these benches present significantly different bodily and social affordances—some benches encourage a playful and exploratory behaviour, while others invite people to relax and socialise (**Figure 4**).



Figure 3. Overview of the area highlighting the four art installations.

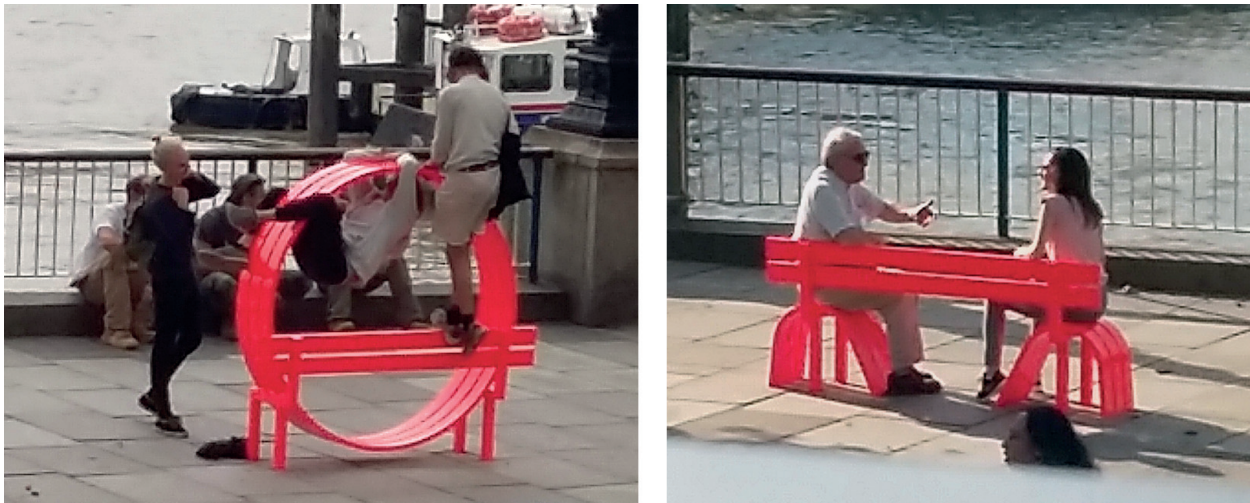


Figure 4. Different behaviours towards the benches, from playing (left) to chatting (right).

The primary methodological tools used for this study were on-site observations and time-lapse photography. Observations are an important tool because they allow a gathering of data that might be considered as an objective view of human behaviour. By observing we can learn about the environment without taking account of people's intentions—something important, given that social activities in urban contexts give rise to patterns of use and movement that are independent of the intentions of individuals [31]. Time-lapse photography was used to record and analyse the interactions. Since the study did not focus on fine details of discrete interactions, but rather on patterns of bodily engagement and social behaviour on the broader urban scale, time-lapse photography seemed a suitable alternative to video recording, while being a technique that has been adopted by influential studies on human behaviour in outdoor settings [24].

The data collection was mainly conducted in August and September 2016, with a total of 15 recording sessions. Each recording session lasted between 30 and 35 min and employed a small action camera. The camera was positioned at the same spot in all sessions, and it was set to take one photograph at intervals of 60 s. The sessions took place at different times of the day and different days of the week, so as to capture the varying conditions of the urban and social setting.

3.2. Social roles around the installations

In order to analyse the bodily, social and spatial interactions around the benches, the people recorded in the area of study were classified in three main categories: players, participants and spectators. Each of these categories tries to address the distinct ways in which people seemingly experience the art installations, both from a bodily, social and spatial perspective.

3.2.1. Players

The category of *players* describes people who were observed engaging in any kind of performative movements with Jeppe Hein's benches. Playing, in this case, denotes a conspicuously

active, corporeal and dynamic engagement of one's own body with the installations. For players, the bench is first and foremost an urban sculpture to be physically and sensorily explored and revealed. More than sparking visual attraction, for players the meaning of the sculptural bench can only be utterly realised through an engagement of their whole bodies, in a playful, physical, performative inspection of the bench's surfaces, structure and balance. Players seem to be driven by an instinct to bodily and sensorily unveil the bench's affordances for action, movement or pure play.

The images captured in Southbank Centre suggest that this playful behaviour is motivated by two main reasons: first, one's own curiosity to explore and to test different movement possibilities, that is, the bench's affordances for action and play. In this group were recorded the most performative people, who engaged in all sorts of acrobatic movements and postures, such as climbing, hanging or sliding on the benches. The second important motivation for adopting a playful behaviour is to pose for photographs or videos. Playing with the benches to have one's portrait taken was more frequent among adults (**Figure 5**).

Unlike conventional sitters who pose on conventional benches, most of the people being photographed amid Jeppe Hein's artworks deliberately adopted an unusual or "funny" body posture, so as to reflect the playful and liberal character of the installations. In either cases—playing for the sake of playing or playing to be photographed—the interaction of players was markedly dynamic and fleeting.

3.2.2. Participants

Some people were recorded at the benches for a relatively long time—typically more than 3 min—though they were not regarded as players. Unlike players, the category of *participants* describes those who did not use the benches to engage in performative or exploratory movements, but rather were there primarily to chat and/or to rest. The term *participant* is borrowed from literature on HCI and public interfaces, where this category has been used to describe subtler forms of engagement between an individual and an interactive installation [32, 33].

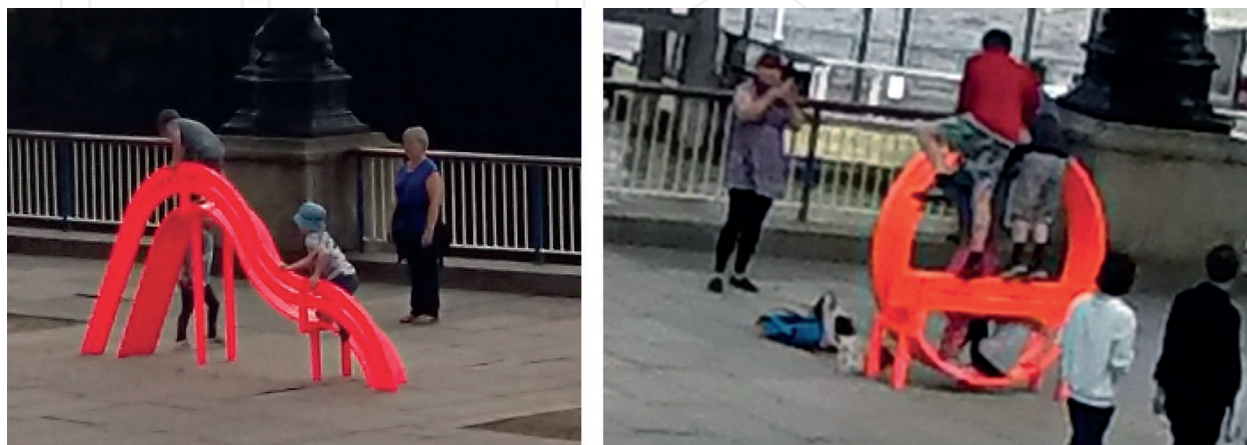


Figure 5. Different motivations among players: playing for the sake of playing (left) and playing to be photographed (right).

Participants' behaviour points to a significantly different relationship to the art installations and the space around them, with respect to the bodily, the social and the experiential realms. If, for players, the benches stand out as urban sculptures calling for sensorimotor explorations, participants seem to regard Jeppe Hein's artful installations as a set of conveniently located urban furniture, where one can sit to wait for a friend, use the mobile or simply to enjoy the panorama of river Thames while resting the legs or chatting with another participant.

Nevertheless the distinction between players and participants is not always straightforward. Part of the recorded people manifested postures and behaviours seemingly located somewhere between the performative actions of players and the more relaxed forms of engagement commonly found among participants (**Figure 6**).

In such cases, *time* was the decisive factor to characterise a person as a player or as a participant: for the sake of the analysis, interactions sustaining the same body position for more than 1 min were regarded as participation, whereas the more fleeting bodily interactions, that is, those lasting less than 1 min were classified as play. The threshold of 1 min to distinguish players from participants is methodologically informed, as it coincides with the intervals of the time-lapse photography used in the study.

3.2.3. Spectators

The category of *spectators* includes people who were observed in the immediate vicinity of a bench (up to around 4 m) while satisfying the following criteria: (a) they were not captured in a walking position; (b) their attention is visibly turned to the bench or, alternatively and (c) they form part of a pair or a group, of which at least one other member is physically engaged with the bench. During the analysis of the photographs a specific class of spectators stood out: those who were noticeably capturing images of people engaging with the installations. Even though this latter class of spectators could form a category of their own—arguably that of “active spectators”, since they are assigned to a functional, specific social role in the context—they were subsumed under the category of spectators so as to better fit the broader scale of the study, namely the urban scale of place (**Figure 7**).

For the purposes of this study, the most important characteristic shared by spectators is that, although referring to people who are not physically engaged with the art installations at a given time, spectators are potential players, that is, they may become active players, either in a



Figure 6. Bodily engagements at the boundary between participation and play.



Figure 7. Multiple social roles in a snapshot: two persons sit (participants); a kid climbs on the right of the bench (player); four spectators stand nearby (two at the front and a couple behind the bench). Four passers-by can also be seen on their way.

matter of seconds or in their possible next visits to the area. What distinguishes spectators from mere passers-by are the bodily, temporal and social relationships between the person, the art installation and the place. Firstly, beholding implies some duration—for this study, at least a few seconds. It also entails bodily and social dimensions: it is a physical posture, a gesture which signals to nearby people that something interesting might be going on. By gazing at the benches, spectators not only stimulate passers-by to do the same. In fact, spectators help feed the whole cycle of social roles around the installations: some of the passers-by may stop around to observe or photograph the benches, and part of these people may go one step further and become players, eventually creating a “social buzz” in the place [27].

Especially during busy recording sessions, several people were observed at the vicinities of the benches, either leaning against the railings or sitting on the ledge beneath them (**Figure 8**).



Figure 8. People standing and sitting by the railings.

Importantly, most of these individuals remained at the same spot for several minutes, and they were not identified as part of a group engaged with the benches. In such cases, these individuals were not included as spectators, because their behaviours seem to best characterise the act of resting or waiting—but one that would apparently take place irrespective of the presence of the benches.

3.3. Main findings

In order to present and analyse the data collected on-site, the four versions of the “Modified Social Benches” are identified as A, B, C and D, as shown in **Figure 9**:

A first glance at the striking shapes above suggests that each design affords different types of bodily and social behaviour. Likewise, each version of the bench may also result in particular forms and levels of aesthetic interaction. This section aims to clarify how these different forms of aesthetic interaction may affect the dynamics of placemaking. **Chart 1** presents a synthesis of the findings, with the distribution of players, participants and spectators around each bench throughout the 15 recording sessions of the study.

The data above reveal that benches A and D share a similar character: in addition to encouraging playful, performative movements, these benches also succeeded in attracting a significant number of spectators around them. An average of 22.67 players per session were registered on bench A, and in only one session (7th September) no players attended. Bench D achieved a slightly higher average of players (22.87 per session), who were also consistently present throughout the study. As for spectators, bench A attracted the largest number of them—an average of 52.87 spectators per session—which, in most occasions, surpassed the number

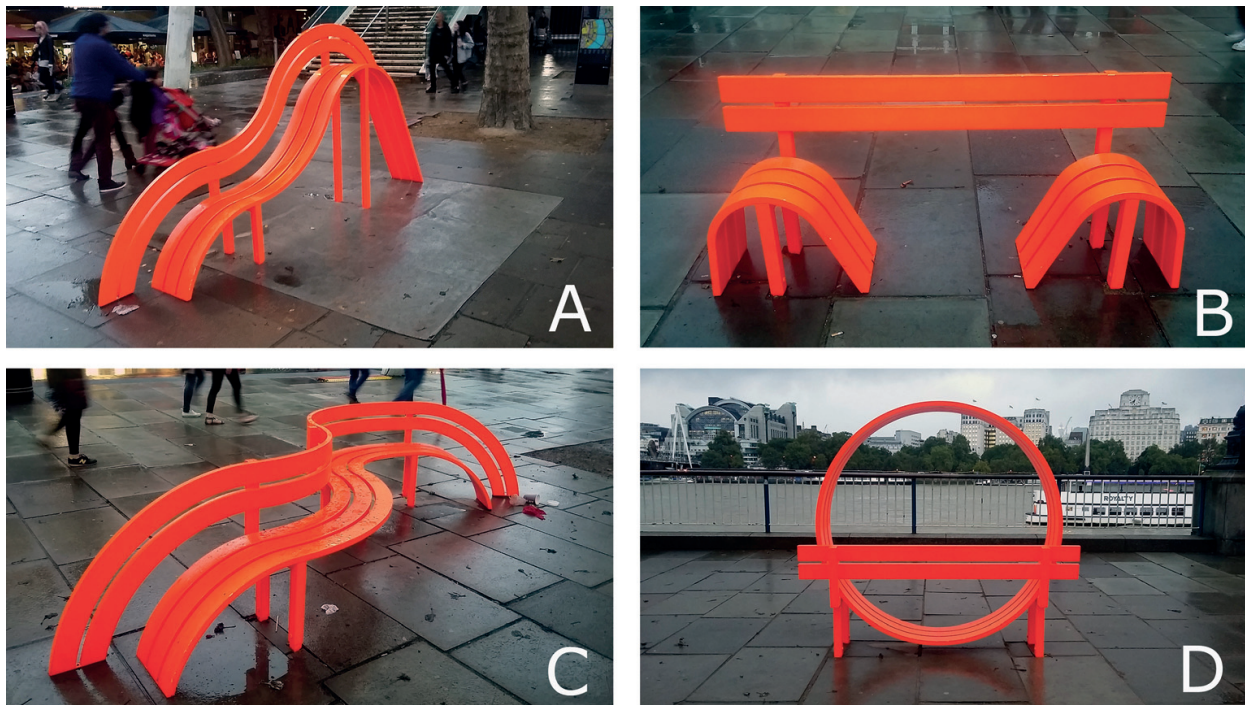
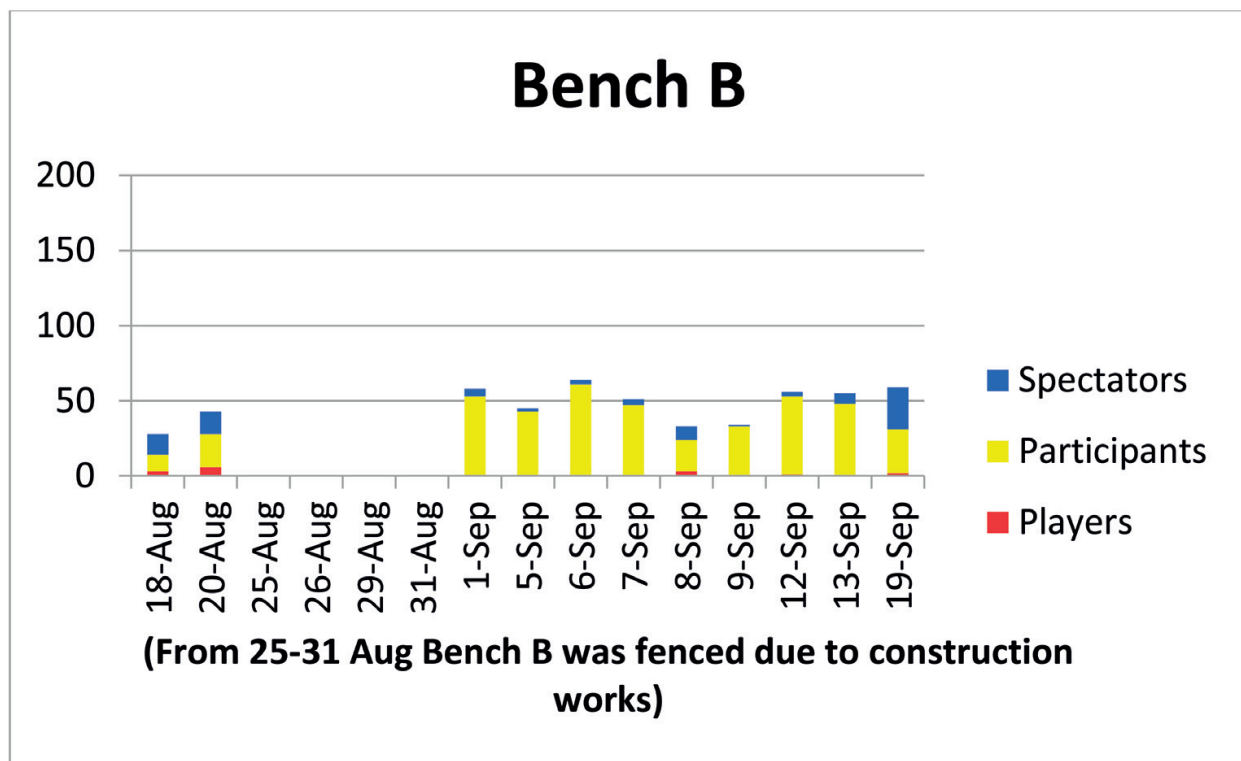
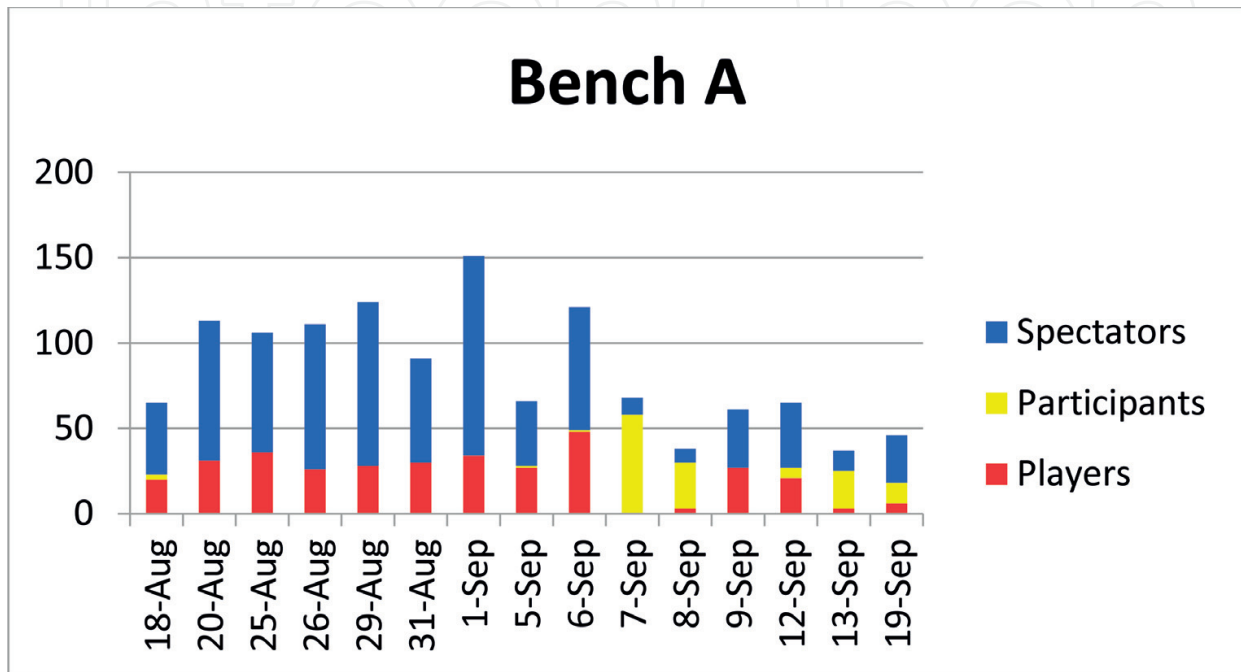


Figure 9. The four versions of the benches analysed in the study.

of players and participants altogether. Bench D saw an average of 32.40 spectators, and their distribution was not so dominant as that verified in bench A.

There is an important qualitative difference that helps explain the quantitative data outlined above. Among the players who engaged with bench A, most of them were children, who found in the slope-shaped installation a particularly amusing affordance for sliding. Thus, for the larger part of the players on bench A, the installation was literally a toy, a piece of



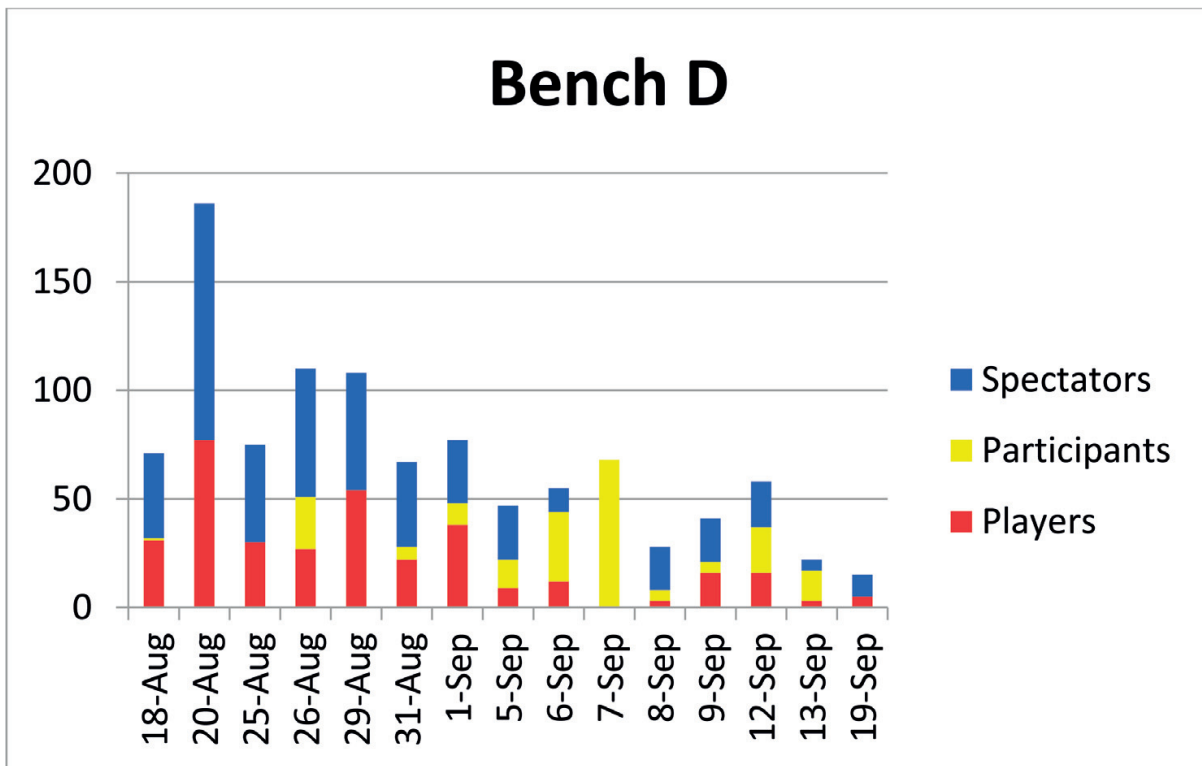
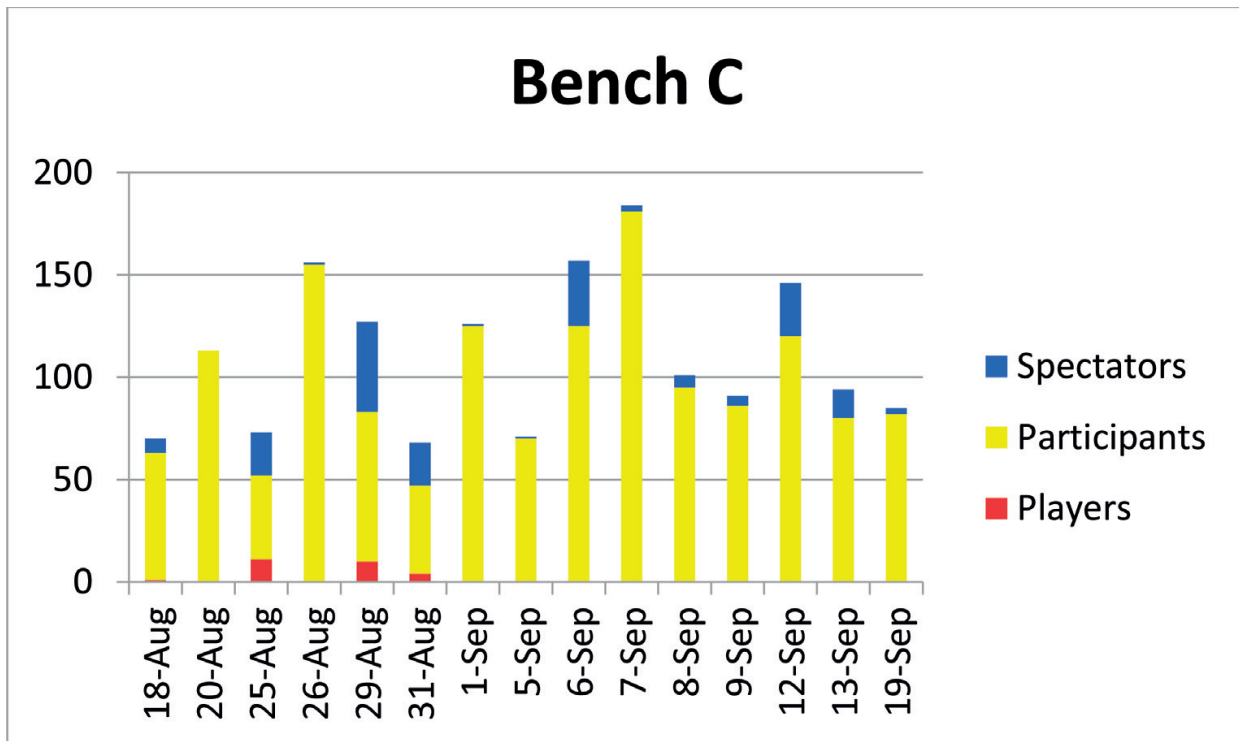


Chart 1. Distribution of social roles for each version of the benches.

playground. And, as one would expect to find in an ordinary urban playground, these young players were accompanied by their parents, relatives or friends, most of whom added up to the number of spectators around the bench (Figure 10).



Figure 10. Social gatherings around bench A as a result of children playing.

Bench D, on the other hand, presented a rather distinct profile of players. Children, adolescents and young adults likewise experienced bench D by performing a wide variety of corporeal movements and postures. And, while the steep shape of bench A imposed serious difficulties for more than one person to play at a time, the circular design of bench D allowed two, three or even more players to explore the installation simultaneously (**Figure 11**).

All these factors contributed to a smaller proportion of spectators around bench D if compared to bench A. In fact, with regard to the social roles, the design of bench D proved to be the most versatile one among the four versions of benches analysed here, as, in most sessions, the three social roles described in this study—players, participants and spectators—were recorded around bench D (**Chart 1**).

Benches B and C also function as platforms for social encounters, but they share a different character if compared to benches A and D. As shown in **Chart 1B** and **C**, the large majority of people recorded at benches B and C were qualified as participants. With regard to Aesthetic Interaction, this finding points to a very different experience, in terms of its bodily, social and spatial aspects. Firstly, the participants recorded at benches B and C found themselves in relaxed sitting positions: their bodies were laying on Jeppe Hein's art installations as they would be on any other conventional bench. Secondly, many of these participants remained sat for several minutes, while resting alone or talking to other people in different social formations (**Figure 12**).

Thirdly, the spatial and social logic of the behaviours observed around benches B and C can be described as self-contained and contemplative: people did not feel compelled to engage in any

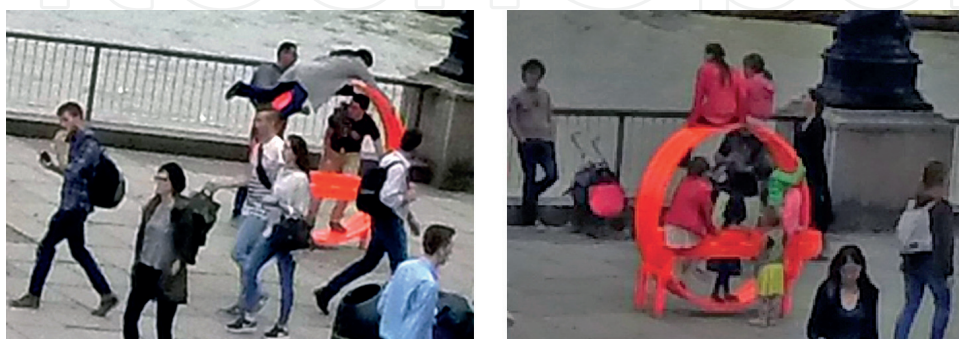


Figure 11. A young couple (left) and a group of children (right) playing simultaneously with bench D.



Figure 12. A mother rests on bench B (left) while the “social character” is evident at bench C (right).

sort of play with benches B and C, and only a few of them were recorded as spectators, with averages of 8.27 spectators for bench B and 12.33 for bench C (Chart 1B and C).

4. Discussion

The main findings summarised above suggest that some correlations between Aesthetic Interaction and placemaking might exist. It was argued that a place consists of a spatial setting where people feel stimulated to go and to stay. Then, based solely on Chart 1A–D, one is tempted to conclude that bench C is the most successful in terms of placemaking, simply because bench C attracted the largest number of people (average of 110.80 people per session). However, the data compiled on Chart 1A–D refers to discrete occurrences of interaction, and not discrete persons, which means that the same individual recorded for, say, 8 min resting on a bench corresponds to eight participants. Considering that many participants captured at bench C remained sat for several minutes, in fact the total number of *different participants* on bench C was significantly lower than that presented on Chart 1C. Hence the placemaking qualities of bench C are twofold: on the one hand, by allowing several people to sit in a variety of social formations, bench C does contribute to placemaking, with a design that encourage people to *stay at the place* often for a relatively long time while resting and/or chatting (Figure 13).



Figure 13. A group of ladies with a baby settle on bench C: from 12.03 pm (left) to 12.30 pm (right) these participants remained unchanged.

On the other hand, precisely because bench C encourages people to stay on it, other people often find no space to sit, interact or socialise on bench C, thus limiting the potential of this bench to create more fleeting modalities of social encounters.

Bench B shares with bench C the elementary character of “a bench to sit on”. Nonetheless, the study shows that, compared to bench C, bench B presents a rather distinct quality with regard to social gatherings. The sitting surfaces of bench B are curved and discontinuous; as a result, bench B is not as comfortable as bench C, and it accommodates only two individuals at a time – whereas up to six people were found simultaneously on bench C. Encouraging neither extended permanence nor different social arrangements, the design of bench B turns out to be the weakest of the four analysed versions with respect to placemaking. In addition, Bench B resists easy classification: although visually striking, its design makes bench B something in-between urban sculpture and urban furniture. In light of Aesthetic Interaction, this generates a problematic situation where people do not feel sufficiently compelled to engage their bodies in playful, movement-based experiences, and, at the same time, they do not feel so much compelled to sit and to stay.

The case study suggests that benches A and D are the most effective in terms of placemaking. These benches attracted high numbers of people (averages of 84.2 and 68.53 people per session, respectively). Most importantly, benches A and D revealed the highest distribution of players, participants and spectators across the recording sessions, which means that benches A and D provided more variegated experiences of bodily and social interactions around them. Not displaying a highly dominant presence of participants—such as those verified on benches B and C—means that more people were given the opportunity to experience benches A and D in qualitatively different manners, such as playing, resting or observing the activities around the benches. Unlike bench B, the striking shapes of benches A and D are unambiguously aimed at playful, exploratory sensorimotor encounters. This versatile, playful and action-oriented character makes benches A and D work in favour of placemaking, by imbuing the urban space with a very particular identity and life through social activities.

5. Conclusion

This paper presented a case study of the *Modified Social Benches*, a set of sculptural benches designed by Jeppe Hein and installed in Central London through the Summer of 2016. After an extensive fieldwork employing time-lapse photography and observations, three main social roles were identified to describe people’s behaviour around the art installations: players, participants and spectators. Each of these social roles refers to a specific level of bodily and aesthetic engagement with the benches, ranging from the performative actions of players to the more constrained attitudes of spectators.

The mapping and analysis of the diverse social encounters and bodily actions triggered by the art installations suggest a correlation between Aesthetic Interaction and placemaking. Drawing from the main findings, it is possible to argue that urban installations encouraging playful, action-oriented and sensorimotor encounters tend to be more effective to placemaking than

installations affording static modalities of social activities. If place is characterised as a lively setting offering different modalities of social encounters and meaningful experiences, then urban artefacts that provide people with a broader variety of social and sensorimotor experiences (like benches A and D presented in this study) seem to better define lively places in comparison to other types of artefacts (like benches B and C).

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