

To Make A Difference: Interpersonal Meanings in Museum-Texts: A Case-Study of the Children's Museum in Amman

Ahmad El-Sharif*

Department of English Language and Literature, Al-alBayt University PO box 130040, Mafraq 25113, Jordan

Corresponding Author: Ahmad El-Sharif, E-mail: a.el-sharif@aabu.edu.jo

ARTICLE INFO

Article history

Received: January 11, 2022

Accepted: February 21, 2022

Published: March 31, 2022

Volume: 11 Issue: 2

Advance access: March 2022

Conflicts of interest: None

Funding: None

ABSTRACT

Systemic Functional Linguistics explicates how texts communicate ideational, interpersonal, and textual meanings. Texts produced by cultural and pedagogic institutions, such as museums, depend on several discursive choices to construct interpersonal meanings communicated through the interaction between the institution, and what it stands for, and the interactant visitors. Museum-texts communicate to/with visitors meanings pertaining to social relationships construed by both the museum and its audience and communicate the mutual relationships between them in relation to role, status, social distance, and feelings of solidarity and affiliation. Meanwhile, children museums have become a widespread phenomenon that promote edifying missions communicated to children through entertaining, interacting, and learning. This study recognises how one exhibition, named 'I am Change' in the Children's Museum in Amman, relies on verbal interpersonal communication to align its young visitors into shared dispositions and perspectives towards environmental concerns related to the importance of conserving electric energy and water resources in Jordan.

Key words: Museum-Texts, Interpersonal Meaning, Conserving Energy, Conserving Water, Children's Museum, Amman.

INTRODUCTION

In 1899, the Brooklyn Children's Museum in Brooklyn, New York City was founded as the first children's museum in the United States and the world. The Museum came as a response to the changes in children's educational needs over time (Rangel, 1987) and to engage their minds from a young age. The main exhibits of the Brooklyn Children's Museum involved the presentation of natural science to children raised in an urban environment. In the following years, both technology and cultural awareness became the most important sorts of exhibits in the Museum (Yarrow, 1989). In the following thirty years, more children museums had been founded; for example, Boston Children's Museum (1913), The Detroit Children's Museum (1917), The Children's Museum of Indianapolis (1925), The Children's Museum (West Hartford, CT) (1927), and Duluth Children's Museum (1930). In few decades, the concept of children's museums has spread worldwide. Thus, there are now Le Musée des Enfants in Brussels (1978), the Children's Museum of Bogotá, Colombia (1986), Eureka! The National Children's Museum in England (1992), ZOOM Children's Museum in Vienna (1994), the Samsung Children's Museum in Seoul, Korea (1995), and Kids Plaza Osaka in Japan (1997).

In the Arab world, the concept of children's museums had been neglected until the onset of the current millennia. In 2007, the Children's Museum in Amman, the Capital of

Jordan, was established. In the following years, it has campaigned to promote itself as one of the main recreational destinations for children and their families. The Museum has also become a cultural and heritage site that attracts visitors, tourists, and official delegations by hosting family-oriented cultural and educational activities. Such cultural and educational atmosphere advocates the mission of the Museum as a pedagogic site that encompasses spaces that communicate edifying discourses which resemble those addressed through ordinary in-class interaction and which address both domestic and universal motifs. The domestic motifs address diverse Jordanian phenomena and concerns; such as Jordan's environmental landscape, the diversity of its fauna and flora, and the limitations of its natural resources, and the scarcity of its water surfaces and supplies. These phenomena and concerns are multimodally addressed through a collection of static and interactive exhibits which are thematically organised around several exhibitions in the Museum.

All the Museum exhibitions contain texts which communicate to its children-visitors a plethora of messages and meanings. This study aims to recognise how 'I am Change' exhibition at the Children's Museum depends on interpersonal meanings in its texts to align its children-visitors into shared dispositions and perspectives towards environmental concerns related to the responsible exploitation of electric energy and water supplies in Jordan. The study argues that

the exhibition encompasses manifold linguistic units which discursively communicate interpersonal meanings to rally children around Jordan's environmental concerns.

THEORETICAL BACKGROUND

Contemporary research in discourse analysis explicates how texts in edifying institutions, such as museums, communicate meanings, narratives, and even ideologies. Among this research on museums language and discourse, few studies addressed museum-texts from Systemic Functional Linguistics (Halliday 1978; Halliday and Matthiessen 2014) in which meanings of communicational systems should serve three metafunctions: constructing social relations between the participants in communication (interpersonal metafunction), representing some aspects of the world (ideational metafunction), and producing texts related to other texts within a certain context (textual metafunction) (see Kress, Jewitt, Ogborn, and Tsarelis 2001). Within the contexts of museums, that research accentuates that museum-texts can produce discourses that undergo analysis and interpretation with reference to predefined syntagmatic and paradigmatic arrangements materialised through the choices of words and grammatical structures in reflecting the motifs, missions, and functions of the museum according to the vision, or ideology, of the authorities or curators of the museum (e.g. Blunden, 2016, 2020; Ferguson et al., 1995; Ravelli, 1996, 1998, 2006).

Museums, and memorial sites, are recognised as serving three roles: commemoration, education, and tourism, and these functions may simultaneously strengthen, or disrupt, each other especially when focusing on the affective aspects of the museum and the activities that occur around it (Sumartojo, 2017: 169). In addition to communicate narratives, a museum performs a pedagogical function that reminds us of its educational mission and its close connection with commemoration. Besides, museums are best recognized as spaces for the preservation of a nation's collective memory and remembrance. Public remembrance may be understood and accomplished through the museum-texts. In some war museums, for instance, the museum exhibits reconstruct the war 'discourses of history' exclusively within the framework of the (adult or young) audiences' personal memories and stories as illustrated through war-related exhibits and verbal narratives (e.g., a child's experience) (see Kosatica, 2019). Furthermore, several museums design and arrange their spaces and exhibits through different scales to narrate, and frame, multiple local, regional, or national narratives. Smith and Foote demonstrate how discourses are arranged in the galleries and exhibits of a museum by arguing that the spatial arrangement of texts, media, and artifacts shape 'narrative storylines' (Smith and Foote, 2017), and these arrangements suggest sequences, connections, progressions, and pathways within, and between, exhibits. In order to reveal these narrative storylines; Smith and Foote suggest that the museum structures and assemblages involve a spatial arrangement that is tied to the meaning of an underlying discourse. And amongst these meanings are the 'how' visitors interact and participate in speech situations and express their attitudes

and judgements; or the interpersonal metafunction of the spatial-texts.

Interpersonal meanings can be unfolded by accounting for the 'social distance' between the interactants and the exhibits in the museum. The relative social distance between an exhibit, or an explanatory text or a caption, can position the interactant visitor as more or less able, or invited, to make direct 'contact' with the exhibit by inviting them, for instance, to 'watch', 'touch', 'grasp', or 'arrange' the exhibits, or some of them. When the interactant visitors are positioned with the exhibit texts as more or less able, or invited, to make direct contact, they are more likely to be more or less 'involved' with the texts (Ravelli and McMurtrie, 2015).

Interpersonal meanings can be also communicated through the negotiation of 'power' and 'authority' between an interactant and a text. In museums, for example, interactant visitors are positioned within the museum-texts as more or less free in terms of 'control'; this means that museum visitors can either read what they want, or they need to follow only a narrative storyline that is predefined by the authorities of the museum. In this regard, one may accentuate how interpersonal meanings are concerned with how the interactants feel comfortable, secure, and affiliated to the museum-texts. For instance, we can distinguish in a museum-text a set of signs by which interpersonal meanings make the interactant feel 'affiliated' by some 'bonding' relationships (Stenglin, 2008). Bonding signs -in texts- reveal the interpersonal meanings by functioning as a measurement to tell how a text, as a semiotic-resource, promotes social interactions and align the interactants into groups with shared qualities, attitudes, and dispositions in a manner that reflects solidarity and affiliation (Stenglin, 2008). Such shared qualities, attitudes and dispositions of affiliation are materialised through 'bonding icons' which stand for shared communal ideals which visitors identify, with or rally around, and these are realised through symbolic icons; such as flags, logos, colours, memorabilia, songs, chants, and even leaders (Stenglin, 2009: 50), or by verbally referring to these symbolic icons in texts.

This current study recognizes children museums as manifestation of edifying cultural and educational institutions that are characterized by the presence of predefined arrangements of texts and storylines which communicate interpersonal meanings that align children-visitors into shared dispositions and values and rally them around Jordan's persistent concerns. These meanings facilitate the process of learning about imperative domestic and universal concerns; such as energy, environment, and social activities. The wide-ranging research on discourse analysis of museum-texts establishes the ground for the current study on the interpersonal meanings related to the rational exploitation of energy and the conservation of water in Jordan as verbally communicated in the explanatory texts in in 'I am Change' exhibition at the Children's Museum in Amman.

THE CHILDREN'S MUSEUM IN AMMAN

The Children's Museum (*Muthaf Al-Atfaal*) is the first interactive museum in the Arab World that is dedicated

to children. The Museum is located at the top of a hill in Al-Hussein's Parks in the western suburbs of the capital city of Amman. The Museum was founded and inaugurated by the Queen Rania of Jordan on 18th of July 2007.

The Museum encompasses a comprehensive inclusive learning space where all children engage in learning activities about their body, the mechanics of tools, biological diversity, and even professions and everyday commercial activities. The outdoor and indoor spaces and exhibits in the Museum are designed and arranged to give children an opportunity to learn through play and interaction. Play and interaction are complimented by live educational programs which encourage children to learn through engagement and self-exploration. For example, children are invited to read stories or listen to them narrated by a mentor in the 'Library', they can express and portray themselves at the 'Art Studio', and they can connect with nature in 'the Secret Garden'. There, children's experience and interaction with the different spaces and exhibits in the Museum can complement formal classroom learning. Meanwhile, such experiences show the child that learning can be both practical and entertaining.

Since its inauguration, the Museum has succeeded in attracting children, and visitors, from all over Jordan and from different socioeconomic backgrounds and learning abilities. It is annually visited by about 250,000 visitors, and received more than three million visitors since opening in 2007 (Children's Museum 2020). Most of the visitors are Jordanian citizens who visit it as families or in organized school-trips. The architectural design of the Children Museum is renowned by its distinctive cultural and thematic concepts that are inspired by the Bedouin tent¹, canopy, and toy blocks (see Figure 1):

The interior the Museum is divided into two zones: the first involves exhibits and multi-purpose halls, and the second is a unified open and spacious hall that encompasses the different exhibitions of the Museum. Meanwhile, the Main Exhibit Hall is divided into several exhibitions which host several collections of exhibits. These exhibitions are arranged into open and unframed spaces to give the visitors the freedom to instinctively navigate through the Museum by taking several paths and directions. The arrangement of these exhibitions and their main themes make major spaces and subspaces as presented in the Appendices (Table 1).

One of the main exhibitions of the Children's Museum is named 'I am Change'. This interactive space is designed with a mission to encourage children and educate them

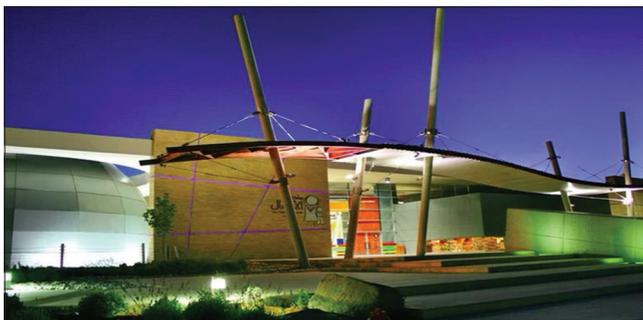


Figure 1. An angle-view picture of the entrance of the Children Museum at night. (photo credit: architizer)

about alternative energy sources and methods of conserving energy and water. The motif behind this mission can be recognized from the fact that Jordan is considered one of the poorest countries in the primary energy sources not only in the region but also in the world (Jarada and Ashhaba, 2017). As Jordan is a non-oil producing country, it also suffers from inadequate supplies of natural resources including water, natural gas and crude oil (Al-Hinti and Al-Sallami, 2017). For this reason, about 97% of total national energy needs are imported from neighbor Arab countries; and this costs 17% of Jordanian gross domestic product (Ministry of Energy and Mineral Resources, 2016). So, the exhibition aims to endow children with an effective role in conserving their environment and changing the situation in Jordan for the better.

The exhibition, with its wide area, includes several interactive exhibits, each of which provides an understanding of energy and its consumption, how it is generated and provided, about water and its importance, and many other sound concepts that are designed to be presented seamlessly and interactively to children, with the aim of encouraging positive behavior towards the environment. The exhibition includes both static, interactive, and hands-on exhibits, and explanatory texts which are all presented to the visiting children at their eye-level to encourage and invite them to interact with the exhibits through reading, touching, and rearranging; Figure 2 below illustrate one side of the exhibition and its exhibits:

Similar to the prevalent policy at the Children's Museum, 'I am Change' exhibition favors informal pedagogical approach that associates children in a bond of sharing and entertainment. It is worth to highlight that this space was implemented with support from the United States Agency for International Development (USAID), and it won the *Emirates Gold Energy Award* for 2015, in recognition of its interactive role in educating children about alternative energy sources and methods of conserving energy and water.

THE CURRENT STUDY

This study identifies the role of museums-texts in constructing interpersonal meanings which communicate the mission of 'I am Change' exhibition at the Children's Museum in Amman. The mission is concerned with conserving energy and water in addition to the rational exploitation of natural resources in Jordan. Reliance on interpersonal



Figure 2. A partial-view of 'I am Change' exhibition space with interactant children-visitors. (photo credit and editing: the Author)

al meanings in this study aims to demonstrate how the educational messages associated with the spatial discourse of 'I am Change' exhibition can be thought of as representations of the world with different kinds of participants, places with some shared dispositions, behaviours, and goals; these representations can project to the interactant child predefined social and universal values and ideas which are reflected on his/her social life in Jordan.

Following the traditions of Systemic Functional Linguistics, this study reveals how the discourse of the exhibition encompasses verbal embodied representations which highlight the ways in which 'I am Change' exhibition communicates interpersonal meanings concerning teaching children the importance of water and energy conversation in Jordan and rallying them around their importance to Jordan.

The study identified the collection of texts in 'I am Change' exhibition by personally visiting the Children's Museum in Amman three times over a period of two months. These visits allowed the researcher to construct an approach of data collection and analysis on the basis of the locative and reflective observation of the researcher's, and the children's, experience with the texts located in the exhibition.

Locative observation involved mapping and documenting the texts and recording how they were arranged and displayed. Here, documentation and recording were achieved by taking static photographs using a digital camera. Furthermore, the locative observation allowed the researcher to observe and document children's interactions with the exhibits in the exhibition pertaining to what the texts communicate to them. These documentations, records, and photographs provided the researcher with data for the reflective observation. This process also involved the content analysis of the data on the basis of classifying, counting, totalling, comparing, and analysing the texts as they appeared in the photos and described in the researcher's documentations and records. These texts are classified and included in a small corpus of all the texts in the exhibition. The collected data were coded and analysed by a qualitative analysis software (MAXQDA2020); code-labels are assigned to the different linguistic elements and units in the corpus following the terminologies used within the tradition of discourse analysis. On the other hand, the reflective analysis of the texts focused on interpreting the different levels of interpersonal meanings. In one level of analysis, the study focuses on the 'denotation' and 'connotation' of the linguistic units and saying what they represent of particular people, places, things and events. Then, the general or abstract ideas 'connotations' of these units are explained in order to interpret and deduce a sense of the kinds of identities, actions and values that are being communicated by them. In the second level of analysis, the study works on identifying the discursive associations between the texts and what they portray, or talk about, in terms of physical features and experiential associations. This level of analysis is mostly oriented towards the interactive models and equipment. In the third level of analysis, the study unfolds the how the texts communicate interpersonal meanings through *power*, *involvement*, *social distance*, and *bonding*.

FINDINGS

The locative analysis of the texts in 'I am Change' exhibition reveals that they come in few forms which can be classified into two types: explanatory (or interpretive) texts and children's texts. Explanatory and interpretive texts (31 texts) are the ones placed next to each exhibit (or interactive model) or illustrative image. Children's texts are texts which are hand-written by the visiting children and they are hanged on the wall erected in the middle of the exhibition. The researcher randomly collected 38 texts from the children's texts in order to analyse them too. Figures 3 and 4 below illustrate these two types of texts.

The explanatory (or interpretive) texts are distributed all around the exhibitions and next to the interactive models and panels. Explanatory (or interpretive) texts are the 'texts which provide a guide to and explanation of the exhibition for the visitor' (Ravelli, 1998: 139); and they are positioned next to an object 'to explain what it is the objects are meant to 'say' – [...] what they reveal, what they relate to' (Ravelli, 2006: 95). Still, several texts are autonomous and communicate messages on topics relevant to energy and sustainable development. As perceived in Figures 3, the typology of the explanatory texts is characterised by their large font-size. The size of each text varies between 34 and 108 words, with the (Standard) Arabic text is placed above the English one. Each text printed onto a coloured (sky-blue, purple, or light green) irregular quadrilateral panel. On the other hand, children's texts are the feedback and reflections which are collected from the visiting children in the form of short texts written by children and displayed on one wall in the exhibition under the name 'I Pledge ...'. Children's reflections are mostly about the importance of water and energy conservation in Jordan. As it is illustrated in Figures 4 (a and b), each visiting child can pick up a blue-coloured (or brown-coloured) card, cut in the shape of a water droplet, and inscribe on the card what he/she is going to do to conserve energy and water. Their answers generally start with the phrase '*naa ata'had* (meaning 'I pledge...'). The majority of the children's texts are written in (Jordanian) Arabic, few are in Standard Arabic or English. The size of each text ranges between eight and twenty-three words. The child can attach the card on a metal wire on a wall to allow other visitors to read them; however, a large number of cards are attached on other wires that are suspended over the visitors' head and near the ceiling; so, the researcher opted to randomly select a sample of these texts for analysis.

Accordingly, the above reflective analysis of the texts roughly present their 'denotation' and 'connotation' and saying what they represent (or 'documents') of particular people, places, things and events. In the following section, the study analyses and discusses how interpersonal meanings are integrally and coherently materialized and negotiated through the two types of texts identified in the exhibition. The focus will be oriented on the general or abstract ideas 'connotations' of these texts in order to deduce a sense of the kinds of identities, actions and values that are being communicated by them.

DISCUSSION

The children-visitors' interaction with the exhibits and texts in 'I am Change' exhibition aims at providing the interactant child with some shared knowledge and experience with the difficulties and challenges associated with producing energy and providing water supplies to Jordanians. These experiences significantly align children into observant communities that are aligned around conserving energy and resources within a controlled bound space. Bound spaces make conceptual spaces for the exploration of ideas and the transmission of learning; they have enormous potential to apprentice visitors into communities aligned around specialized and theoretical field knowledge that can be transmitted through interaction (Stinglin, 2008: 59).

Interpersonal meanings are blatantly communicated in 'I am Change' exhibition through panels involving explanatory (or interpretive) texts. The choices of size, shape, and colours of the displayed 31 panels make them appealing to the children's curiosity in a matter that they 'communicate imperatives such as: *Look at me! Read me! Pay attention to me!*' (Stinglin, 2008: 59). A substantial feature of these texts is that they are laden with multimodality, and they also involve 'bonding icons' that verbally communicate interpersonal meanings associated with solidarity, in-group membership, and social affiliation. The reflective analysis reveals that a salient mode of communicating interpersonal meanings happens through the interaction between the children and the texts of the different exhibit (mostly interactive models) in 'I am Change' exhibition. For example, children are verbally asked to distribute the generated electric energy to the residents of a building or a neighbourhood, or send water supplies to a neighbourhood. Such actions are associated to a sense of in-group activities which encourage the interactant child to find solutions to the daily persistent problems related to electricity and water in their community. The exhibition addresses these problems that concern all Jordanian families and suggest feasible solutions in a manner the Jordanian child can relate to, and is highly likely to have had some experience of in his/her own life.

When children visit 'I am Change' exhibition, they are positioned as the main concern of the Museum; they are construed as the makers of 'change', whose curiosity and interest regarding energy and water resources in Jordan should

be reoriented towards changing the future of Jordan to the better. This suggests that social relations, along with knowledge, are at the fore of the exhibition's mission, and that the children's emotional response to the interactive exhibits and texts should be substantially foregrounded at the expense of the 'power' and 'authority' of the Museum as a pedagogic institution. In other words, the institution's authority is played down, with 'solidarity' and 'ingroup-membership' and 'social-affiliation' are given priority. Generally, museum texts work on positioning the young visitors to receive knowledge or involve them in active exploration by which they uncover knowledge by themselves (see Ravelli, 2006: 73).

Museum-texts can either foreground the visitors or distance them according to the modes of addressing. In 'I am Change' exhibition, all explanatory and interpretive texts have the choice of the speaker revolves around the plentiful use of pronouns of solidarity. Based on the Arabic version of the explanatory and interpretive texts, there are 133 references to people and groups using personal pronouns. Visiting children are then foregrounded through the use of second-person singular '*anta* 'you' in the texts, which appears 53 times (40%), and the first-person plural pronoun '*nahnu* 'we' appears in 40 times (30%). Conversely, first-person singular pronoun '*ana* 'I' appears only 10 times (7%). This salient use of the second-person singular 'you' and the first-person plural pronoun 'we' in the texts reflects how these texts work on establishing an intimate personal relationship between the exhibits, and those people and groups they portray, and the interacting young visitors. On the other hand, the second-person pronoun 'you' establishes a social relation between the Museum (or the exhibition) and a child as its usage is governed by the two semantics of power/status and solidarity (Brown and Gilman, 1960). This is manifested in Text no. 1 below where the copious use of second-person singular 'you' accentuates intimacy and close social relation and reduces the level of social distance between the institution and their young audience:

Text no. 1

الماء في جسمك
لا بد أنك تعرف مسبقاً أن الماء ضروري لبروي عطشك والحفاظ على
صحتك، لكن هل كنت تعلم أيضاً أنا الماء جزء
كبير من تكوينك؟
نعم، هذا صحيح، حيث يتكون حوالي ثلثي جسمك من الماء.



Figure 3. (a and b) Examples of explanatory (or interpretive) texts in 'I am Change' exhibition: a. 'then and now' (left); and b. 'energy sources-natural gas' (right): photos credit: the Author



Figure 4. (a and b) Examples of Children's texts 'I Pledge...' (right): photos credit: the Author

Water in you

You already know that water is required to quench your thirst and keep you healthy, but did you also know that water is a big part of what makes you, well... you?

That's right, nearly two-thirds of your body is made up of everyday H₂O!

On the other hand, using the first-person plural 'we' usually marks in-group membership and social affiliation and equality in status. It is found that singular 'you' is mostly used in the texts to communicate intimacy and solidarity and reduce differences in power and status, the pronoun 'we' equally refers to (Jordanian) people in the texts who are portrayed addressing the visitors. Therefore, in-group membership and social affiliation are expressed through an element of 'personalization', such as the use of a first-person plural pronoun by two Jordanian young-men in Text no. 2 below:

Text no. 2

احداث فرق- عبد الله عبود وعمر دويكات، مخترعين
أحد أكبر الازمات التي يواجهها العالم هي تكلفة الطاقة ومشكلة
الاحتباس الحراري. لذلك، كان من واجبننا التفكي
أحد أكبر الازمات التي يواجهها العالم هي تكلفة الطاقة ومشكلة بالنيابة
عن مجتمعنا في حلول لتحسين هذا الوضع. ويقوم مشروعنا باستبدال الوقود
الأحفوري المستخدم لتبريد
شاحنات نقل الأغذية بالطاقة الشمسية. حيث تقوم هذه العملية بتوفير
الطاقة والحفاظ على الطعام الذي يتم نقله يبقى في
حالة جيدة وصالحة للاستهلاك، وهذا يقلل من انبعاث غاز ثاني اكسيد
الكربون بنسبة 33%
من المهم أن نتمسك بقيمتنا ومبادئنا وهذا ما سيقودنا للنجاح ويساعدنا أن
نصنع التغيير القادم. من المهم ايضا ان تكون
احلامنا كبيره وان نستمر في المحاولة لتحقيقها.

Making a difference- Abdullah Abdo & Omar Dwekat, inventors

"One of the biggest crises that word is facing is the cost of energy, and the problem of greenhouse gases. Thus, it was our duty to think on behalf of our community of solutions in order to make things better.

Our project replaces the fossil fuel used to cool food transport trucks with solar power. The process saves energy and keeps food being transported valid and good to eat. This helps decrease CO₂ emissions by 33%.

It is a very important that we stick to our values and principles, and this will lead us to success and help us to be the change. It is also important to dream big, and to get

up one more time than we have knocked down, in order to achieve those dreams."

From the emotions and aptitudes of the two young-men in the text, we see that the copious use of the first-person plural pronoun 'we' associates between the 'personalised' individuals portrayed in the texts and the visiting children. In other words, and within the context of the text mission ('making a difference'), the exhibition has been reconverted from the role of a 'teacher' to that of a 'mediator' where characters portrayed and represented in the texts speak for themselves and their Jordanian peers.

Interpersonal meanings are further communicated in the explanatory and interpretive texts through various elements related to modes and processes. References to the aptitudes, actions, and achievement of Jordanian 'makers of change' act as sources of inspiration to how a child can 'make a change' in his local context when it comes to conserving energy and water. For example, the Jordanian characters who address the children as 'change-makers' use lucid direct speech that is laden with imperative mood and material processes to emphasize that the desired outcome from the Jordanian child is action; and this is materialised in the following text:

Text no. 3

احداث فرق محمد حجي، مؤسس زوايد
النظر الى الأمور من منظور مختلف
بدأت الفكرة بأخذ الأشياء والمخلفات اليومية وتحويلها الى اعمال فنيه
مبدعه. ثم تطورت فكرة اخرى وهي ماذا لو دمجنا المفاهيم البيئية بتمكين
المجتمع عن طريق التدريب وتمكين النساء والشباب في المجتمعات النامية؟
لا تستخف بمهاراتك، ولا تعتقد ان فكرتك البسيطة هي مجرد فكرة في البال.
قم بمشاركتها والعمل عليها وتحويلها الى أمر عظيم له تأثير على مجتمعك
وعالمك، لا تنتظر الوقت المناسب او المكان المناسب او حتى الشخص
المناسب لتنفيذ الفكرة -ايدا الان.

Making a difference, Mohammed Hajji, founder of Zawayed

Looking at things from a different perspective.

"The idea started by taking everyday items and waste and turn it into artistic and creative creations. And then, another idea was formed, why not combine environmental concepts with community empowerment by training and empowering the women and youth in developing societies?

Don't underestimate your skills. Don't think that your simple idea is just an idea in mind. Share it, work on it, and it will turn into something big which has an impact in your society and the world. Don't wait for the right time, the right to place, or even the right person to help you with the implementation - just go ahead and start."

Unlike other moods which attempt to elicit the child's intellectual engagement, such as the interrogative, the texts (especially the ones named 'making a difference'), work explicitly on reducing social distance and motivating interaction on the part of young visitors. This is why the imperative mood appears 17 times in the panel texts whereas the interrogative appears 5 times only. In addition, the explanatory and interpretive texts entice the interactant children into material ('working') and relational ('being' or 'having') processes rather than behavioural ('waiting') or mental

(‘thinking’) processes. To illustrate, the textual analysis of the texts identified 186 processes; among them 75 material processes (40%) and 71 relational processes (38%). On the other hand, there are just 12 behavioural processes (6%) and 9 mental process (5%). This choice of processes works on alluring the young visitors with a sense of agency as change-makers as they get to design and produce their own initiatives to make better choices when it comes to the rational exploitation of energy and water resources. In addition, this makes the panel texts in ‘I am Change’ a more engaging space which places children at the centre of change-making processes inside their direct communities.

Furthermore, interpersonal meaning is communicated by another copious reference to Jordan in the explanatory and interpretive texts and their illustrative images. This is realised through reference to Jordanian individuals, places, and events. Ideationally, Jordan is an independent state that encompasses a group of people with shared identity and culture who live over a geographic space. Jordan is acknowledged by its limited natural resources and scarcity of water surfaces (Jarada and Ashhaba, 2017; Al-Hinti and Al-Sal-lami, 2017). In the context of the universal concerns about conserving energy and water resources, Jordan is depicted in the exhibition as a nucleus of purposeful activities that are carefully orchestrated by Jordanian individuals. These activities have been portrayed as initiatives to ‘making a change’ to evoke powerful interpersonal attitudes; and that in turn promotes the status of the exhibition, and the Museum, to function as a ‘bonding icon’ (Stenglin, 2008; 2009). Here, the reflective analysis of the semiotic resources shows that reference to individuals occurs 36 times, and that referencing takes the form of using proper names of female and male characters (e.g., Rafea, Ayman, Omar), by collective nouns (e.g., children, teachers, friends), and through pronouns (e.g., I, we, them, everybody, all...etc.). Reference to Jordanian characters sets the context for the existence of individual initiatives, and that foregrounds positive appreciations of those individuals. Displaying these initiatives capitalizes on the values which draw the young visitors to participate in, and ‘create’, similar initiatives within their community. Such initiatives not only contribute in making life better in small communities, but also have the potential to foster a strong sense of social affiliation. In addition, the explanatory and interpretive texts refer to 34 places from all around the world; 30 of them are either ‘Jordan’ or places in Jordan where there are water surfaces (e.g., the River Jordan, the Dead Sea, Azraq wetlands). Nine of these referencing texts are also accompanied with an image of the place; Figure 5 illustrates:

As it is also illustrated in Figure 5, Jordan is also referred to via events; that means when water resources in Jordan were plentiful and abundant (circa 1900 CE). The study identified 29 instances in the explanatory and interpretive texts which refer to events which have taken place in Jordan and have had significant impact on energy and water resources. For instance, we have reference to ‘producing solar power in Jordan’, ‘exploring ways to use nuclear energy in Jordan, and ‘relying on natural gas as a main energy source’, ‘reducing the wetlands

in Azraq’, in addition to the fact that ‘the Mujib canyon is now dry’. All these events establish durable understanding to the challenges which Jordan face in conserving and sustaining its scarce resources. With reference to the mission of the exhibition, reference to events is important to interpersonal meaning as it additionally communicates relationship between the texts and the interactant visitors because these events construct in-group alignment around shared valuations and values associated with Jordan’s environmental concerns.

Finally, the aspects of interpersonal meanings are communicated verbally through the children’s texts which are written on paper-cards and displayed in the exhibition. These texts involve the children’s reaction to the themes addressed in the exhibition which mainly revolve around the conservation of energy and water resources. In fact, of all the exhibitions and spaces inside the Children’s Museum, only ‘I am Change’ exhibition displays children’s texts. Consequently, this medium appears as a marked practice in the exhibition because of its prominent pedagogical and edifying motif as a space that targets children’s awareness and frame their behaviour and practices regarding conserving energy and natural resources in Jordan. The messages in the texts are mostly written in simple Jordanian Arabic, or in ungrammatical Standard Arabic, and they take the style of attitudinal meanings communicated in an expression that begins with the first-personal singular pronoun ‘ana (‘I’) followed by a commissive or assertive ‘speech act’ (Parker and Riley, 1994; Searle, 2002) (e.g., *I pledge...., I swear, I promise...., I will conserve...., I will never waste*, etc.). In addition, interpersonal meanings are plainly communicated through a sense of ‘personalisation’ as the majority of the selected cards show the name of the child who wrote the text. The texts below illustrate:

Text no. 4

انا لا اوفر استخدام الكهرباء
اتعهد ان اوفر في استخدام الكهرباء
وشكرا
جنى

I do not save electricity [*sic.*]
I promise to save electricity
Thank you.
Jana



Figure 5. An interpretive text-panel about Wadi Mujib (Mujib Canyon). (photo credit: the Author)

Text no. 5

انا اسمي علي...
سأحافظ على الكهرباء للمحافظة على مستقبل افضل مع الكهرباء
وسأحافظ ايضا على الماء ولا اسرف فيها

My name is Ali...

I will conserve electricity to maintain a better future with electricity [*sic*.]

I will also conserve water and not waste it

Speech acts are central in the communication of interpersonal meanings. As the spatial-texts of the exhibition are meant to communicate to the interactant children messages associated with energy production and consumption and the scarcity of water resources and supplies in Jordan, the visiting children use speech acts in return to communicate that they understand the messages being received. The children's texts contain texts which are recognised by the institution of the Museum as a verbal reaction for the verbal and non-verbal communication which take place around the exhibition. Accordingly, the speech acts which are written by the children describe some sort of 'spoken' communication between the child and the Museum, or other visitors who read their cards. Even though these texts are not the product of the Museum, they can communicate important attitudes and opinions. So, they become part of the semiotic-resources which are displayed in the exhibition to communicate its mission.

The discussion above focuses primarily on the salient linguistic units which seem particularly relevant to the function of the exhibition as a space of interactive teaching, knowledge acquisition, and meaning-construction. These linguistic units primarily focus on the organization of the exhibition's texts, their verbiage, and their representation of reality.

CONCLUSION

This study is an attempt to advance research on the discourses communicated by museum-texts in the Arab world. It follows well-established discourse analysis frameworks which are based on Systemic Functional Linguistics in order to explore how interpersonal meanings are realised and communicated between the texts in 'I am Change' exhibition at the Children's Museum in Amman and the interactant children on the basis of their understanding of the messages communicated in these texts. The study accentuates that the mission of 'I am Change' exhibition addresses children's awareness and experience with challenges and concerns related to energy and water in Jordan. The manners in which these texts add meanings and beliefs to the exhibits reveal the discursive practices and principles employed by the Museum in relation to its mission as a pedagogic, and recreational, institution. This also shows how these practices and principles influence the produced texts to make them appealing to children in the one hand, and make them rally around some shared communal ideals related to the conservation of energy and water supplies in Jordan. Through the discussion presented in this study, we see that interpersonal meanings are verbally communicated in children's museums to function as tools to align the visiting children into groups with shared qualities, attitudes, and dispositions in a manner that reflects solidarity and affiliation.

END NOTE

1. https://archnet.org/sites/7088/media_contents/83534

REFERENCES

- Al-Hinti, Ismael and Al-Sallami, Hesham. (2017). 'Potentials and Barriers of Energy Saving in Jordan's Residential Sector through Thermal Insulation'. *Jordan Journal of Mechanical and Industrial Engineering*, 11(3). (pp. 141-145)
- Blunden, J. (2016). *The Language With Displayed Art (E-facts): Linguistic And Sociological Perspectives On Meaning, Accessibility And Knowledge-Building In Museum Exhibitions*. Unpublished Ph.D. thesis. University of Technology/Australia. Available online via: <https://opus.lib.uts.edu.au/bitstream/10453/90004/2/02whole.pdf>
- Blunden, J. (2020). 'Adding 'something more' to looking: The interaction of artefact, verbiage and visitor in museum exhibitions'. *Visual Communication*, 19(1), 45-71. <https://doi.org/10.1177/1470357217741938>
- Brown, R., and Gilman, A. (1960). 'The pronouns of power and solidarity'. In T. A. Sebeok (ed.), *Style in Language*, (pp. 253-276). The Technology Press of Massachusetts Institute of Technology and John Wiley & Sons, Inc.
- Children, M. (2020). 'The Children's Museum-Jordan Annual Report 2020'. Available online via: <https://cmj.jo/reports>.
- Ching, F. (1996). *Architecture: Form, Space and Order*. 2nd ed. New York: John Wiley and Sons.
- Ferguson, L., Carolyn, M., and Louise, R. (1995). *Meanings And Messages: Language Guidelines For Museum Exhibitions*. Sydney: Australian Museum.
- Halliday, M. (1978). *Language as Social Semiotic*. London: Hodder Arnold.
- Halliday, M., & Matthiessen, Ch. (2014). *Halliday's Introduction to Functional Grammar*. 4th ed. London: Routledge.
- Jarada, H., & Ashhaba, M. (2017). 'Energy Savings in the Jordanian Residential Sector'. *Jordan Journal of Mechanical and Industrial Engineering*, 11(1). (pp. 51 -59)
- Kress, G., Jewitt, Carey, J., O., and Tsatarelis, Ch. (2001). *Multimodal Teaching and Learning: The Rhetorics of the Science Classroom*. London: Continuum.
- Kosatca, M. (2019). 'Sarajevo's War Childhood Museum: A Social Semiotic Analysis of 'Combi-Memorials' as Spatial Texts.' In R. Blackwood and J. Macalister (eds.) *Multilingual Memories Monuments, Museums and the Linguistic Landscape*, (pp. 161-184). London: Bloomsbury Publishing
- Ministry of Energy and Mineral Resources. (2016). Ministry of Energy and Mineral Resources (MEMR) 'Annual report 2015'. Available online via: https://www.memr.gov.jo/En/List/Annual_Reports; accessed on 19 January 2021.
- Parker, F., Riley, X., & Kathryn, L. (1994). *Linguistics for Non-linguists*. 2nd ed. Boston, MA: Allyn & Bacon.
- Rangel, J. (1987). 'A Children's Museum Adjusts to a New Brooklyn'. *The New York Times*. Retrieved on 14.2.2021

- from <https://www.nytimes.com/1987/11/29/nyregion/a-children-s-museum-adjusts-to-a-new-brooklyn.html>.
- Ravelli, L. (1996). 'Making language accessible: Successful text writing for museum visitors'. *Linguistics and Education*, 8(4), 367–387. [https://doi.org/10.1016/S0898-5898\(96\)90017-0](https://doi.org/10.1016/S0898-5898(96)90017-0)
- Ravelli, L. (1998). The consequences of choices: Discursive positioning in an art institution. In A. Sanchez-Macarro and R. Carter (eds.), *Linguistic choice across genres: Variation in spoken and written English*, (pp. 137–153). John Benjamins Publishing Company.
- Ravelli, L. (2006). *Museum texts: Communication frameworks*. Routledge.
- Ravelli, L., & McMurtrie, R. (2015). *Multimodality in the Built Environment: Spatial Discourse Analysis*. London: Routledge.
- Ravelli, L., & Stenglin, M. (2008). 'Feeling space: interpersonal communication and spatial semiotics'. In E. Ventola (ed.) *Handbook of Applied Linguistics, Vol. 2, Interpersonal Communication*, (pp. 355–393). Berlin/ New York: Mouton de Gruyter.
- Searle, John. R. (2002). 'Speech Acts, Mind and Social Reality.' In G. Grewendorf and G. Meggle (eds.) *Speech Acts, Mind and Social Reality: Discussions with John R. Searle*, (pp. 3–16). Dordrecht: Kluwer Academic.
- Smith, S., & Foote, K. (2017). 'Museum/Space/Discourse: Analyzing Discourse in Three Dimensions in Denver's History Colorado Center.' *Cultural Geographies*, 24 (1): 131–148. doi: <https://doi.org/10.1177/1474474016663930>.
- Stenglin, M. (2008). 'Interpersonal meaning in 3D space: How a bonding icon gets its 'charge''. In: Unsworth, L. (ed.) *Multimodal Semiotics: Functional Analysis in Contexts of Education*, (pp. 50-66) London: Continuum.
- Stenglin, M. (2009). 'Space odyssey: towards a social semiotic model of three-dimensional space'. *Visual Communication*, 8(1): (pp. 35-64). doi:10.1177/1470357208099147
- Sumartojo, S. (2017). 'Local Complications: Anzac Commemoration, Education and Tourism at Melbourne's Shrine of Remembrance'. In J. Wallis and D. C. Harvey (eds.) *Commemorative Spaces of the First World War: Historical Geographies at the Centenary*, (pp. 156-172). London: Routledge.
- Yarrow, A. (1989). 'New Children's Museum Joins 2 Old Favorites'. *The New York Times*. Retrieved on 16.2.021 from <https://www.nytimes.com/1989/10/13/arts/new-children-s-museum-joins-2-old-favorites.html>

APPENDICES

Table 1. The major spaces and subspaces and main exhibits of the site of the children's museum

Space	Exhibition	Main exhibits	Themes
The Exhibit Hall	Human Body	<ul style="list-style-type: none"> • fitness features and human body parts such as eyes, nose and hands. • a clinic area. 	<ul style="list-style-type: none"> • Exhibits reveal the human anatomy such as the digestive and sensory system. • children get physically involved by pushing themselves to the limit to test their fitness and physical abilities. • children closely explore vital parts that make up the human body.
	Biodiversity In Jordan Exhibit	<ul style="list-style-type: none"> • Plants and animals • geological exhibits such as rocks and minerals 	<ul style="list-style-type: none"> • Exhibits involve a variety of animals, birds, plants, fish, insects • immersing the visitor in Jordan's forests, desert, river and sky.
	Ancient Times	<ul style="list-style-type: none"> • life size dig-in area • cave • interactive maps 	<ul style="list-style-type: none"> • children are allowed to get in the area and dig in models of ancient monuments from old times and learn all about them. • children can also learn all about their country's ancient history through various stations spread around and grasp an idea of past through the fossils they can find around in the cave.
	Stars and Space	<ul style="list-style-type: none"> • Model of the moon • Model of the solar system • A fully dressed astronaut • Stars constellations • The orbits 	<ul style="list-style-type: none"> • This space is enclosed within a dark dome. • It involves sophisticated, hands-on interactive modular exhibits all of which featuring information about astronomy and the space sciences. • How to navigate the stars. • The causes of the four seasons. • The movement of satellites in orbits.
	I am Change	<ul style="list-style-type: none"> • Texts and Pictures • Interactive boards • Models of houses and flats • Models of home electric-appliances • Models of wind and wave turbines • Models of solar-cells and mirrors, and light-source • Models of electric generators and engines • Children's texts 	<ul style="list-style-type: none"> • This space aims to inspire children to conserve energy and water. • The space provides energized space for those who want to make a difference and help invent solutions to meet the challenges of Jordan's water and energy dilemmas.
	Up and Away	<ul style="list-style-type: none"> • A child-sized plane, • model of air-control tower • flight simulators • Air pumps 	<ul style="list-style-type: none"> • Learning the principles of aerodynamics. • Learning the components of an aircraft cockpit.
	Light and Optics	<ul style="list-style-type: none"> • Light sources • Prisms • Mirrors of different types • Fiber-optics cabinet 	<ul style="list-style-type: none"> • Children learn about light and how it affects what we see, or think we see. • They explore what it is made of with the use of prisms. • Children make experiments with awesome optical effects!
	Imagination Playground	<ul style="list-style-type: none"> • Large mobile blocks. • A crane 	<ul style="list-style-type: none"> • This space involves a mobile block-based play system that transforms children's minds, bodies and spirits through active and creative play. • Children in this playground can build a new world every day; they make imaginary places, houses, palaces, cities and factories.

(Contd...)

Table 1. (Continued)

Space	Exhibition	Main exhibits	Themes
	Townscape	<ul style="list-style-type: none"> • a miniature model of how the real city looks like. • A supermarket • A bakery • A bank • A police station 	<ul style="list-style-type: none"> • Children get to play roles and enjoy shopping for grocery and goods in our mini supermarket, • Children learn about all kinds of bread from different international nations in the bakery. • Children learn about banking and money transactions and currencies. • Children learn about forensics and criminal investigation and finger-prints in the police station.
	Once Upon a Shape	<ul style="list-style-type: none"> • Blocks • mirrors 	<ul style="list-style-type: none"> • A nursery and a toddlers' Area
	The Super Service Center	<ul style="list-style-type: none"> • a miniature model of how the real garage looks like. • Tools • Engines • Automobiles oils and lubricants. 	<ul style="list-style-type: none"> • Garage exhibit. The garage area motivates children to learn team work and communication through play and interaction.
Art Studio		<ul style="list-style-type: none"> • Paints and paintings 	<ul style="list-style-type: none"> • Delivering exciting programs for children of all ages to bring out the inner artist.
Library		<ul style="list-style-type: none"> • Books (a vast selection of Arabic and English books) 	<ul style="list-style-type: none"> • the Library entices children to explore through the joys of reading. • topics ranging from science fiction to cooking,
The Secret Garden		<ul style="list-style-type: none"> • A green house • Plants 	<ul style="list-style-type: none"> • Children can have an interactive and educational experience with nature. • children can connect with nature; learn about planting, seeds, watering, different local plants, • children learn about the nutritional values and about healthy food.
Tinker Lab		<ul style="list-style-type: none"> • Water Sink • Tables • Laboratory equipment • Projector 	<ul style="list-style-type: none"> • activities and educational programs that develop the inborn curiosity of children, and grow love for tinkering, • the lab builds confidence in the children's ideas for creating inventions that they can keep and share with others.
Outdoor zone		<ul style="list-style-type: none"> • Models of world monuments • Water fountains • drums 	<ul style="list-style-type: none"> • interactive exhibits in outdoor space, • the outdoor theatre is ideal for performances and plays.

Table 2. The distribution of explanatory and interpretive texts in the exhibition

Text Theme	Number of Texts	Size in words	Mode	Description
'Making a Difference'	5	511	texts and personal pictures	Inspiring stories of Jordanian pioneers who succeeded in launching and developing initiative towards the wise exploitation of energy and resources
'Then and Now'	4	147	texts and landscape pictures	The status of water surfaces and sources in Jordan in the past and now
'Energy Sources'	3	275	texts and energy sources pictures	difficulties and challenges of energy production in Jordan (oil, natural gas, nuclear)
'Water Sources'	3	288	texts and energy sources pictures	The types of water sources available in Jordan (ground, surface, and retained)
Directive and Interpretive Texts	16	644	texts	placed next to Interactive Models to provide instructions to perform interactive activities
Total	31	1865		

