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Designing refugees' camps: temporary emergency solutions, or contemporary paradigms of incomplete urban citizenship? Insights from Al Za'atari

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Abstract

Millions of people have been forcibly displaced around the world at an alarming rate. In 2018, approximately 70.8 million people (UNHCR 2018) were living in refugee camps. These camps are the most immediate response to the emergency. However, they have become more than a simple temporary solution, with refugees spending significantly longer than they should. Motivated largely by an economic rationale, the camps are often produced rapidly, cheaply and effectively to accommodate the largest possible number of shelters in the shortest time. The aim of this paper is to explore whether the concept of permanence should be embedded in the spatial configuration of a refugees' camp, or whether the concept of transient and temporary community would better reflect the aspirations of the users. The Al Za'atari camp has been selected as a case study to explore the nexus between spatial configuration and social aspirations of the refugees' community. Indeed, the findings revealed that the spatial configuration of the Al Za'atari camp reflects social fabric, habits and organization of the refugees' community. This has occurred to the point that the camp has taken on the appearance of a sort of informal city. This study therefore suggests recommendations to support the design of spatial and architectural solutions that better meet the actual needs of the final users largely disregarded in the current emergency approach.

Keywords: Refugee camp, Informal cities, Jordan, Al Za'atari refugee, Temporary cities, Social impact

Introduction: The refugee's crisis: a tragic challenge to urbanism

The refugee's crisis is growing at unprecedented pace, due to humanitarian emergencies, such as the unstable political situation that many countries are experiencing, or due to climate change and related natural disasters, nowadays, global pandemics. As the United Nations High Commissioner for Refugees [UNHCR] reported (UNHCR 2018), the global population of forcibly displaced people has increased rapidly from 43.3 million to 70.8 million between 2009 to 2018. Furthermore, every minute in 2018, 25 people are forced to flee from their homes. The majority of this increase happened between 2012 and 2015 due to the Syrian conflict in 2011. Conflicts in Iraq, Yemen, the Democratic Republic of the Congo (DRC) and South Sudan have contributed to this displacement, as well as the massive flow of Rohingya refugees from Myanmar to Bangladesh in 2017. These areas are suffering from numerous challenges including security situations and political unrest leading to larger outflows of refugees. Jordan is presently experiencing an increase in the flow of refugees. Made even harsher by the climate change and related desertification, the demand from this increasing population is a critical concern and additional needs of dwellings and services must

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be provided to meet this demand. The main stakeholders of the refugee camps in Jordan are refugees, governments and non-government organizations (NGOs) (UNHCR 2019).

International discourse has given increasing attention to the unique form of human habitation lived by internally displaced persons in refugee camps (Agier 2008, 2002; Alnsour and Meaton 2014; Ashmore et al. 2003; Brun 2001; Hart et al. 2018; Herz 2012). There is no universal agreement of the actual conceptualisation of the refugee camp space. It has been described as temporary, transient, city-camps, semi-permanent, spaces created "between war and city" (Agier 2002), that play a formative role in residents' migration story (Stevenson and Sutton 2011). The lived spaces in refugee camps is positioned on a spectrum between two main arguments. On one side, an argument is made that the refugee camp is a temporary space intended for transition. This argument is often made by international organisations and NGOs. This position emerges with clarity when looking at guidelines and handbooks for camps construction published by the main international organisations such as the UNHCR (UNHCR Innovation 2015). On the other side is the concept of a type of *permanence*. The solutions for establishing dwellings by UNHCR have considered the basic design and function of refugee shelters without modifications (Corsellis and Vitale 2005, 2008; Manfield et al. 2004). Albeit this is not an explicit strategy, and this comes perhaps as an unintended consequence of a decision made on purely functional and financial grounds. The concept of *temporarily* implicitly remits to the avoidance of legitimization of the refugee camps in order to maintain its governance. In fact, prominent depictions have tended to conceptualise refugee camps as spaces of transition and impermanence. This is hardly surprising given the international political nature of emergency support and the fact that such accounts are frequently motivated by an underlying concern with social justice. However, these ideological constructions often ignore the understanding of more micro-level and prosaic processes involved in the making of these places. A variety of intermediate conditions may occur between the two concepts of refugee camp as a "permanent" VS "temporary" solution. This includes the same camp going through multiple socio-spatial stages and phases, thus requiring a flexible strategic approach. Architecture and urban planning are the most suitable disciplines in terms of appraising the right stage and way forward in this regard. This overcomes the one-size-fits-all approach currently underpinned in international guidelines and documents. Some refugee camps may be setup as a genuine temporary solution requiring a provisional accommodation for a limited time, and in fact some of them do no longer exist, especially those related to natural disasters, as earthquakes in Japan or Chile (technically IDP). Other camps become permanent e.g. Palestinian refugee camps in Lebanon, Jordan, or Syria. Indeed, some refugee camps change their function upon completion of the emergency or merge into a previous city, such as in the case of Al-Baqa'a in Amman, Jordan. Innovative strategies for green transition or agricultural purposes can be implemented using the infrastructure provided by the refugee camp. In the case of Al Za'atari, it was evident that the situation generating the emergency went beyond a quick and simple resolution. Therefore, a design approach more considerate of long-term socio-economic implications of the spatial organisation might have helped to prevent most of the current issues.

This paper challenges the traditional concept of camps as temporary solutions, by investigating through the words of refugees their own interpretation of the space, but also accepting that *permanence* applied to refugee camps is a slippery concept from a political perspective. The aim of this paper is to explore whether the concept of permanence should be embedded in the spatial configuration of a refugees' camp, or whether the concept of transient and temporary community would better reflect the aspirations of the users. This paper proves with a robust set and rich qualitative dataset, how refugee camps hold more than a *hybrid* status in the meaning of *ephemeral cities* (Montanari et al., 2007). Therefore, this paper presents the theoretical framework by exploring the socio-spatial elements of refugee camps in "Refugees camps: no longer a temporary solution, not yet a city" section. This is followed by "Methodology" section, the outline of the chosen methodology and context of the case study, the Al Za'atari camp in Jordan. "Data presentation" section presents the data findings which are further discussed in "Data analysis and discussion" section. The paper is concluded in "Conclusions" section.

Refugees camps: no longer a temporary solution, not yet a city

There is increasing discourse that is positioning refugee camps as places that are gradually becoming enduring organizations of everyday life, social life and processes and systems of power (Agier 2008, 2002; Stevenson and Sutton 2011; Hart et al. 2018; Paszkiewicz and Fosas 2019). This section explores if refugees living in camps are just temporarily transient communities as so often depicted by NGOs and international organisations or if these refugee communities are living in a hybrid ephemeral place that embeds the temporary qualities of an environment and eventually evolves into a permanent urban and social fabric, an informal city.

Refugee camps as cities with ordinary places?

Place is broadly understood as spaces that people are attached to or spaces that have particular meaning to people (Lombard 2014; Sampson and Gifford 2010; Brown et al. 2012). In urban planning, place is often depicted as a socio-spatial construct combining two main elements: firstly, the spatial location and locale and secondly, the sense of place. The location and locale refer to the "where and shape of a place". This could be physical environments or even less static locations such as public transport and markets. The sense of place is a subjective element that is challenging to convey simply. It is the social element of place also described as the emotional attachment people have to a certain place. This construction of the physical and social elements of space results in diverse understandings and experiences of places. This can be linked to issues surrounding power, contestation and conflict. Different groups with different needs and aspirations will have different values, meanings and uses of a place. Therefore, a "place" is a space with value and meaning in the context of power. According to Foucault (1982: 789), "power is 'a way of acting upon one or more acting subjects by virtue of their acting or being capable of action". It exists only in a relational sense, as exercised by some on others (Lombard 2014). Drawing on this conceptualisation of place, allows a holistic understanding of refugee camps and how they are constructed spatially, socially and politically.

Focusing the discourse on the making of a place, moves away from a developmentalist perspective that views refugee camps in a continuous emergency state of temporary-ness, and instead focuses on the "ordinary" and "everyday" nature of refugee camps. This offers a potential alternative way of understanding the processes of which refugee camps are constructed. Following the suggestion of (Lombard 2014; Certeau et al. 1998), that everyday practices in urban places can provide an analytical focus for understanding the city, giving attention to the everyday sociality of refugee camps promotes a focus on the importance of people as autonomous actors who creatively engage with, and shape, their surroundings. Indeed, people construct places and places construct people (Brown et al. 2012; Livingston et al. 2008). The attachment of people to a place has a deep association that is often linked to an individual's sense of belonging, identity and security (Scannell and Gifford 2010). Hart et al. (2018) describe this as "homemaking", the actions and aspirations of camp residents to imbue their dwellings with a sense of home. Everyday practices and customs such as attending to the creation of dedicated space for receiving guests shape the residents' ideals of home in combination with the constraints imposed by institutions responsible for funding, hosting, and managing the camps. Furthermore, the role of spaces in refugee camps reflect small cities with the same spaces of education, worship, security and healthcare. Thus, revealing the agency of residents in refugee camps to improve their surroundings and conduct normative social relations, such as in informal cities (Hart et al. 2018; Paszkiewicz and Fosas 2019). It therefore leads to the realisation and re-imagining of refugee spaces as places for sociality and living, going beyond just the basic needs.

Refugee camps as arenas of powers?

Using the concept of place articulated in the section above, illuminates elements of power within refugee camps (Fábos and Kibreab 2009; Mah and Rivers 2016; Lombard 2014). This is often related to the determination of international and local political and bureaucratic agendas. In this regards, international and local humanitarian organizations are primarily concerned with the offer of assistance for refugees. In focusing on the protection and survival of inhabitants, the international agencies that run these camps rarely empower residents to act as citizens of them (Stevenson and Sutton 2011). The informal practices and processes that occur in refugee camps often refer implicitly to issues of power through a focus on particular form of power relations. In this case, this is particularly between international and national states and organisations and the community of refugees. The discourse tends to take a frequent binary view which perceives refugees as the "losers" (Lombard 2014; Mah and Rivers 2016) in power relations. For divergent reasons, host governments, international donors and humanitarian organizations often reinforce this dichotomy (Hadafi and Fallahi 2010). This persistent narrative assumes that, permitting refugees to improve their environment and add meaning to a space will influence their decision to stay in the camp for longer. Therefore, such changes are unwelcome from the perspective of host states and donors, and sometimes as Paszkiewicz and Fosas (2019) explain, refugees themselves, as this may be seen as undermining their claims for long term solutions to displacement.

Under this discourse, the rigid dichotomy between temporariness and permanency persists, facilitating an easier management of possible returns, the preferred UNHCR durable solution to refugee crisis. Kennedy et al. (2008) explained that part of the challenge is that the handbook of the UNHCR does not relate camps to the surroundings in the local community and stands as a temporary and isolated site. An example of this is through the use of language and labels such as *person of concern or displaced population* from the UNHCR handbook. An alternative conceptualisation is offered by Sharp et al. (2000) which suggests an entangled layering

of power that is an amalgamation of forces, processes, practices and relations. In this case, the entanglements of power express a reciprocal rather than oppositional or binary relation. In the context of refugee camps, power can refer to the consolidation of social structures and hierarchies in spatial terms which reflects the existing power structures (Hart et al. 2018; Schmeidl 2002; Paszkiewicz and Fosas 2019). The question of citizenship in the camps arises from this conceptualisation. Refugees often do not hold the status of citizens, as such, the space they are entitled to use mirrors the lack of consideration for the social construct allowed by a consolidated urban fabric. However, the spatial dynamics enacted by refugees in camps do prove their willingness to create a space that resembles a permanent built environment. In the refugee camp, the residents are dependent on the bureaucratic structures and decisions which affect the services they can use and the status they have (Agier 2002).

Refugee camps as cities of process?

An additional strand to the evolution of refugee camps as cities is the conceptualisation of places as process (Lombard 2014). The previous sections have explored the discourse surrounding the influence of places on the political and personal lived realities of camp residents. However, the materiality and structure of these places are also influenced by people's activities and agency (Cresswell 2004). The focus on activities as a significant influence on the socio-spatial structure of place disrupts the conception of place as fixed and static. In this context, the everyday activities within a refugee camp are perceived as critical to the construction of the idea of place. It implies a re-thinking and re-framing of the camp resident in which they are seen as actors/agents in the construction of the refugee camp (Paszkiewicz and Fosas 2019). Seeing place as process allows for a recognition of the social practices and efforts that go into the construction of the place. This recognition is often unrecognised despite the value in place-making.

The home space can be transformed into a place in which traditions and values can exist through social practices such as e.g. women gathering, cooking and washing as shown in Fig. 1 (Certeau et al. 1998; Simadi and Nahar 2009). This is based on refugee's experiences and aspiration to modify their lived space and even provide environmental improvements such as such as tree planting (Hart et al. 2018). Modifications to the shelter to facilitate social activities has been a large part of the socio-spatial transformation of the camp to suit their needs and express their values (Knox and Mayer 2013). Residents have added extra units to shelters although financial constraints play a role in determining the number of huts, tents, constructed brick or clay houses and the upgrading of residential units. This is not limited to the external environment and includes decorating and furnishing, enclosing their compound for privacy, limiting direct access and protecting their community from undesirable climate conditions. Camps therefore transform to a more informal and fluid layout than a grid layout where the limitations of the camp become less obvious. The urban fabric of shelters is more organic and meets peoples' desire to connect and stay near relatives and friends. They start adding spaces and rooms to the shelter structure and take into consideration the organization of the shelter for extending their family. Despite spatial limitations, fundamental social activities are taking place including births, deaths and marriages (JABR 1989). Picker and Pasquetti (2015) give some conclusion in explaining that camps are becoming a city in the sense of a social and political space, yet there are shortages of services and this temporary situation of accommodating people does not account for the long-term socio-economic situation. Thus, the urban requirements frame a camp as a city or as an incomplete urban formation.

Fig. 1 (Top) Areas created by refugees for social gathering and washing in the Al Za'atari camp-North of Jordan, (bottom) Modified and planted garden besides a shelter (Source: Authors' photo)

Methodology

The research philosophy of this study is based on interpretivism as an epistemological paradigm, justified by the aim of uncovering the meaning given to a refugees' camp by its users. The authors believe that in order to unveil the meaning beyond camps as *spaces or places*, gauging the view of the refugees was essential. A semi-ethnographic approach was considered the most suitable to allow a thorough examination of a comprehensive dataset of evidence and spending considerable time in the field of the Al Za'atari camp allowed exploring culture and social practices. To achieve this, the research methodology rests on a single case study strategy, in order to allow for an in depth understanding of the intertwined and complex socio-economic dynamics happening inside the camp and across different stakeholders. However, this is also a limitation of this study. In fact, Al Za'atari cannot be considered an average case study (Flyvbjerg 2006)not even a critical or exceptional one. The motivation beyond the construction of Al Za'atari influences the transferability of findings and conclusions. This cannot be considered equally relevant to cases in which refugees camps are built to cope with an emergency with a high degree of predictability in terms of its resolution (i.e. a flooding). . This is based on direct observation pursued through 15 visits to the chosen case and a robust qualitative dataset of interviews, gauging the view of refugees on the camp. The selection of the Al- Za'atari camp in Jordan has been based on the rationale that this is the largest camp in Jordan and the second largest in the world. Over 150 interviews with refugees hosted in the Al-Za'atari camp have been conducted on the 15 visits (24 in depth semi-structured interviews and 147 questionnaires). The interviews were conducted with the intention of understanding the refugees' perspective on the current way of managing the spatial response to their needs as understood by international organizations. A further 40 in-depth interviews with experts and professionals in the field (manufacturers, NGOs professionals, academics, researchers) were also administered. This was with the purpose to verify the correct interpretation of the literature regarding the approach followed by NGOs and international organizations in designing and implementing camps. Interviews with refugees considered the age, social status, gender and educational level and other attributes. They were conducted in Arabic by a female researcher, to allow for the wider participation of all genders, and where administered under the surveillance of the local police. Texts were recorded and transcribed from Arabic, then translated into English for coding and identification of key-nodes. The analysis of the texts has been conducted by using the NVivo software.

Understanding the context: Al-Za'atari camp

The Al Za'atari camp is located in the desert zone, 10 km east of the Mafreq Governorate as shown in Fig. 2. It connects to a secondary road to the highway near to the military border and is at the crossroads to Syria to the north. The camp is surrounded by rural areas and the topography is slightly flat and sandy. The camp climate has extreme conditions of hot summers and cold winters with no rainfall from May to September and, occasionally, in October and November. Sandstorms begin in March and last until May. Al Za'atari has grown out of a desert area and become the second largest camp in the world after the Dadaab camp in Kenya which houses 329,811 refugees (Ledwith 2014). Around 400.000 Syrian individuals were dispersed around non-camp settings and urban areas, predominantly in the north of Jordan but those who decided to settle in urban and rural areas were not supported by the UNHCR (WHO 2013).

The Jordanian government allowed Syrian refugees access to governmental services and settled in the Al Za'atari camp from 2012. They initially had a planned capacity of 20,000 refugees but reached 45,000 by the end of that year (Fig. 2, top right). By 2015 the estimated number of refugees was 83,000, distributed amongst 12 districts as visually illustrated in Fig. 2, each sector containing blocks, communities and shelters. The ratio of men to women was 50% for each part. Young people comprised 57% while 19.9% under 5 years old (UNHCR, 2018, 2019). The Al Za'atari camp includes 31 schools, 58 community centres, 2 hospitals, 9 health care centres, 1 delivery unit and 120 community health volunteers (UNHCR 2018).

The Al Za'atari camp has grown rapidly out of an empty stretch of desert area resulting in the increase of shops, restaurant, schools, medical care centers and nurseries. This concentrated bustling of life and community is evidenced by the coining of the most busy and active street, the *Champs-Elysees* street (Skretteberg 2019). The camp dwellings increased from 2400 in September 2012 to 26,000 dwellings in April 2020 (Ledwith 2014; REACH 2014). The Al Za'atari camp, therefore, has been in high demand to provide protection and services for unexpected numbers of refugees (UNHCR 2013). Most refugees have settled in the Al Za'atari camp from Dara and have worked in agriculture although some are skilled workers such as builders and carpenters.

The layout of the Al Za'atari camp began as a grid organization and evolved through social organization into a more informal layout (Fig. 3). The camp is located on a ring road and measures 3.5 km from east to west.

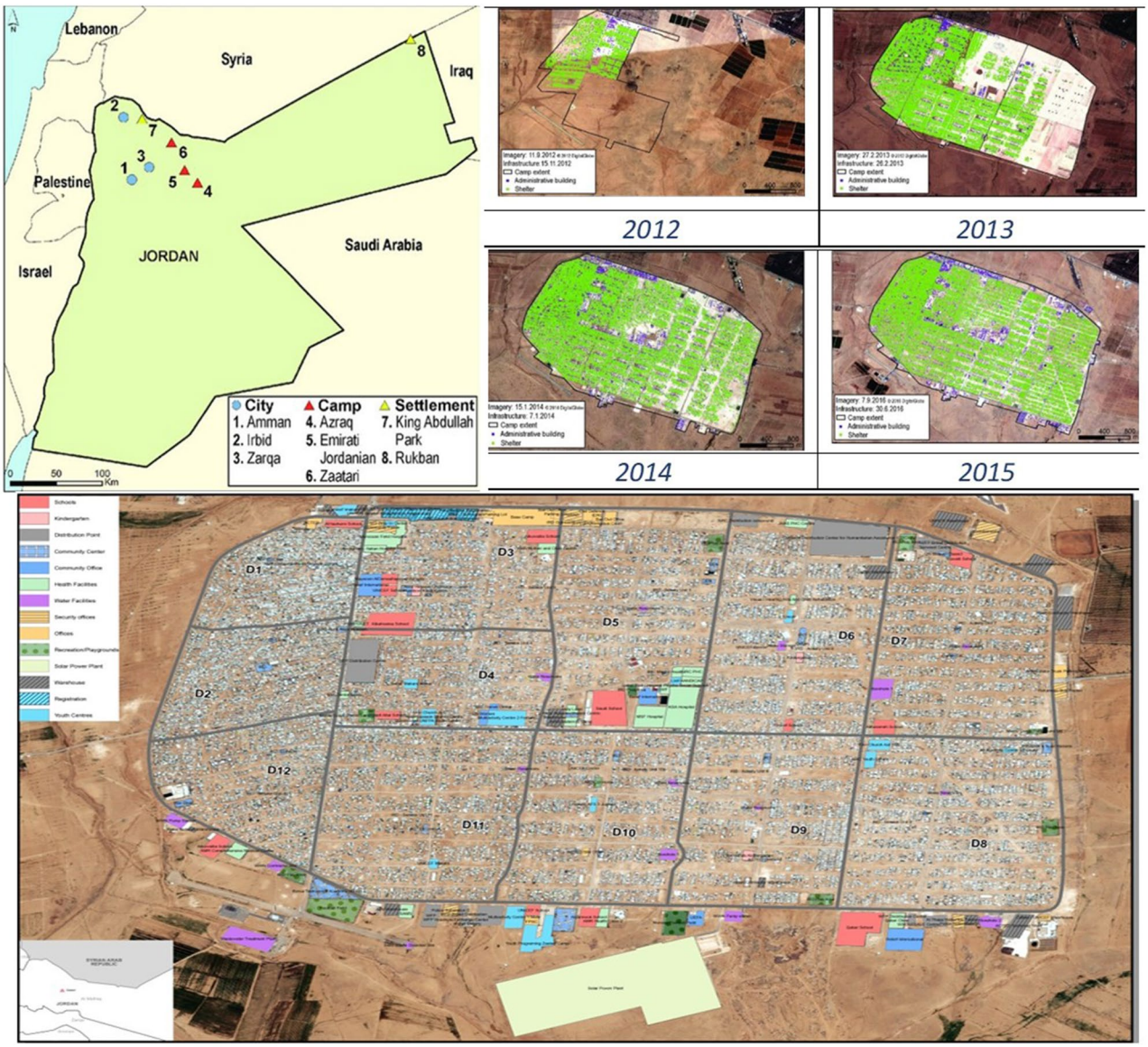

Fig. 2 (Top left) Syria border with Jordan and Al Za'atari refugee camp location (Source: Jussi and Vorobeva (2017), (top right) The Al Za'atari camp between 2012 and 2015 (Source: (Jussi and Vorobeva, 2017), (bottom) Al Za'atari refugee camp districts in 2019 (Source: (UNHCR 2019)

The west side was located first and is called the old side. Initially in this area, the refugees were settled haphazardly, close to relatives and water sources. Eventually caravans replaced tents but it was a challenge to accommodate caravans into a small area and retain access for emergency vehicles and other services (Ledwith 2014).

The caravans had the same informal layout and organized in U shapes to be close to relatives and friends in courtyards and gathering spaces. This way of spontaneous urban organization had an influence on the quality of services provided to refugees. Although, the grid layout established new sectors and caravans were placed in rows that took into consideration the provision of adequate access to services. By the end of 2013, most tents had been upgraded to prefabricated shelters (Fig. 3, bottom left). In 2013 a second camp (Al Azreq) was built 20 km from Zarqa city and opened to transfer Syrian refugees to it (Fig. 3, bottom right). The United Arab Emirates was the donor who established the camp, although different types of units were built to a higher standard than the Al Za'atari camp. Refugees did not prefer Al Azreq due to its location and distance from public transportation. Refugees would prefer to stay in poorer conditions with services and shelters

Fig. 3 (Top) informal layout in the Al Za'atari camp (Source: Authors' photo), (bottom left) Prefabricated shelters in the Al Za'atari camp (Source: http://www.google.jo), (bottom right) Al Azreq camp in Jordan (Source:http://www.apnews, 2018)

Table 1 The Al Za'atari by numbers and livelihoods (UNHCR 2020a)

Overview of the Al Za'atari	Estimated number
Number of Syrian refugees	120,000 Syrian–now 76,688
Area of the Al Za'atari	530 Hectares
Number of caravans	over 26,000
Number of tents	8000
Percentage of refugees from Dara	80%
Shops	over 3500
Other shops	680 shops that engage children
Community center	58
Three water wells	Capacity of each 3600 m^3
Active work permits	13,773
Weekly wealth consultations	9001
Number of babies born per month	+20% in the last 5 years
Number of schools	32
Illegal electricity wires	300 km
Cost of electricity per day	16,130 USD

rather than leave their families and relatives in the Al Za'atari camp.

The population in the Al Za'atari camp and livelihoods have expanded to different extents as shown in Table 1. Indeed, as one of the largest camps in the world, the population numbers in Al Za'atari over the years are not linear and do fluctuate due to several factors such as war and political stability (Lintelo et al. 2018). For example, while there were over 200, 000 Syrians in April 2013, the estimates as shown in Table 1 have been consistently around the 80, 000 mark since August 2015 (UNHCR 2020b). Ledwith (2014) indicates that the Al Za'atari camp costs 500,000 USD per day. The Al Za'atari has a high poverty rate with two thirds of refugees below the national poverty line as determined by the UNHCR (2019). The high cost of livelihood means that refugees have to rent and buy items for at costly (resale) prices.

In the Al Za'atari, around 3000 informal shops are operated by refugees and 3000 laborers have opportunities

to work for community-based NGO. As far as services, three boreholes provide 3.3 million liters of water per day distributed by 82 trucks delivering water to public and private water tanks. But an unfair distribution of water happens in the camp and refugees are complaining regarding shortage and polluted water. In reality, refugees experience electricity cuts several times a month due to the illegal use of energy and lack of official supervision.

Data presentation

The dataset of this study relies on the following primary sources:

- 147 structured interviews (questionnaires) with refugees.
- 21 semi-structured in-depth interviews with refugees.
- 10 semi-structured in-depth interviews with experts and architects and NGOs.
- 15 direct observations of the Al Za'atari camp (in person fieldwork, including photo survey).

The research was conducted throughout 4 years (2014–2017) and distributed through 15 visits to the Al Za'atari camp, each semi-structured interview lasted between 30 and 75 min. Women represented 40% of participants and most of them are housemothers except a few who were working with NGOs as volunteers. Most male participants were working on farming or handcraft jobs such as builders except 1–2% of them who were working in office jobs.

Furthermore, semi-structured interviews with experts have been used to confirm the understanding of the approach beyond the design of the camps from the international organization. The researchers confirmed that international organizations tend to consider camps as an emergency solution, with a temporary lifespan. This has been gauged through the literature first, as explained in the literature review, then confirmed and corroborated through the in-depth interviews with experts, architects and NGOs.

Data analysis and discussion

As anticipated in the previous sections, the empirical dataset of interviews with refugees have been analyzed with the aim to detect their perception about the camp. This is with respect to four antithetical themes, as identified in the conceptual framework discussed in the initial sections: *space VS place* and *temporary VS permanent.* At this goal, concepts related to these four themes have been identified through concepts coding, then counted (frequency analysis of concepts) and their mutual relationship analyzed (themes analysis). Related to the theme of *permanence* the researchers have identified concepts related to key-events in life, such as marriages and births, happening in the camp. Related to the theme of *place* the researchers have identified concepts related to place-making, giving social meaning and purpose to the space. For example, having friends associated with spaces, or running memory-making experiences, such as going to school, regularly conducting social activities such as social gathering, singing, going to the market, etc. All these concepts have been systematically re-arranged around the four key themes.

Is this camp my home town? The Al Za'atari citizens' perspective

The paper codes the interview questions through three groups which are; (1) community (*space* vs *place*), (2) events and (3) time (*permanent* vs *temporary*). Such groups are related to interview questions and each group branches out to comprehensive classifications as shown in Table 2 and Fig. 4.

Refugees responses and answers were coded under related nodes which connected to the aim of the interview questions. Each node includes a number of child nodes that the researcher coded whilst recording interviewees and this allows maximum flexibility of interview input. The researchers administered in-depth semi-structured interviews with 21 refugees. NVivo software was used to analyse data of semi-structured while structured interview results were analysed manually and fed the themes by using coding in NVivo analysis.

Overall, the analysis showed that all refugees mentioned experiences related to the perception of the camp as a *place* for living (i.e., associating the camp places to memorable events, lifechanging experiences, etc.), whilst

Table 2 Code classification by refugees needs and requirements

Name	Number of interviews	Number of coding
Community (space vs place)	0	0
It is a *space* for living?	21	46
It is a *place* for living?	13	22
Memory of friends	20	39
Memory of marriages	4	5
Time (permanent vs temporary)	0	0
Permanent solution	15	36
Beneficiaries	5	6
Birth	7	8
Family	17	32
Schools	9	11
Temporary situation	20	68

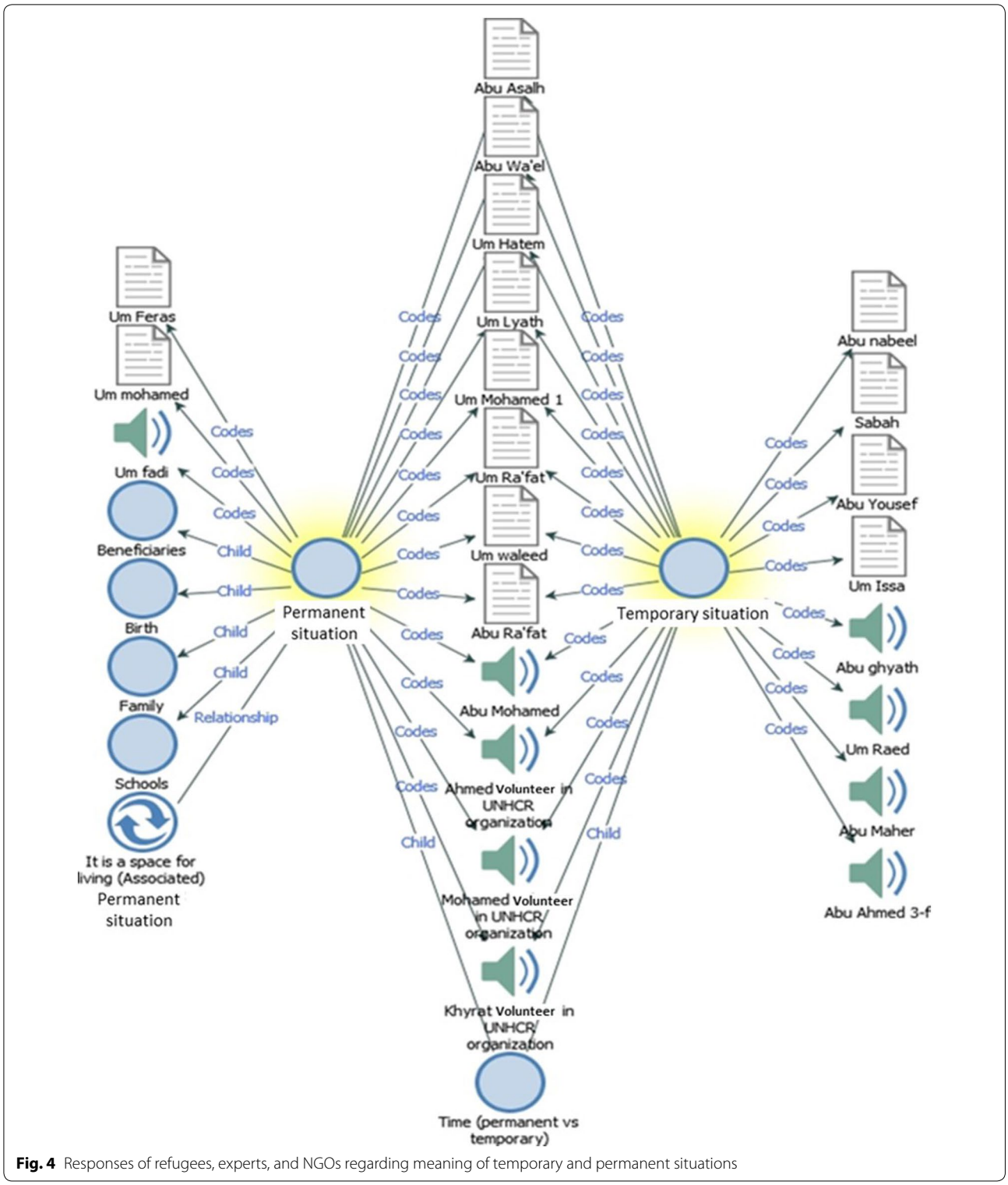

Fig. 4 Responses of refugees, experts, and NGOs regarding meaning of temporary and permanent situations

only 7% refugees mentioned experiences related to the perception of the camp as a *space* for living (i.e., not associated with memorable or lifechanging events). Figure 4 illustrates the relationship between nodes in terms of depending and independent variables. The refugees' responses present the connectivity between variables

and if it influences living condition of refugees in The Al Za'atari camp as their hometown. The highest connection (17 responses) between the camp is *space for living* and *temporary situation,* a concept on which refugees agree in different occasions. Whilst the low connection (5 responses) exists between the concepts of the camp as *place for living* and *temporary situation*. Table 4 reveals the refugees' responses which have an unclear connection between the camp as a place for living and other variables.

In contrast, Table 2 shows the relationship between the camp as a *place* or a *space* opposed to *permanent situation* and *temporary situation.* There is agreement with 94.26% refugees on the idea that humanitarian organizations provided them with space for a *temporary* solution, whilst 5.74% agreed on the idea that the camp is a *permanent* situation. On the other hand, 84.42% is recorded by refugees, they transferred to the camp as a temporary solution, and 15.58% noted the camp as a place in good condition and permanent condition.

Furthermore, Fig. 4 illustrates a number of refugees who are struggling between a temporary situation and a permanent situation in the camp. Many are in the middle column that distributes their responses in two directions. As a result, refugees face inappropriate situation that lead them to code some of their living experiences in the camp under temporary situation and other practices under permanent condition.

The following examples, extracted from the interviews, show how the texts were used to gauge the different perception of *space VS place and temporary VS permanence* in the camp.

The following sentences were considered linked personal memories associated to places in the camp:

I like my block of caravans because I like to spend the night with relatives talking in darkness (a lady, adding that insect and rodents create an issue).

I cannot live without (bahra), it feels I am in my home again. I added a second door in the backyard of the shelter to get more privacy (a man).

The following sentences were associated to functional aspect of the camp, i.e. to spaces in the camp;

I use to sleep outdoors of my shelter in bad climate conditions in summer and winter to allow privacy for my wife and teenager daughter because I have just one shelter (a man, saying that his ethics and beliefs prevented him from sleeping in the same room with his daughter).

A disabled man stated that if a boy wants water he will ring many caravans to get a glass of water, he said ethics and traditions and values of cultural and social aspects do not exist anymore due to the mixing of cultures inside the camp. He also complained about medical care where he mentioned that doctors used to give patients painkillers for all kinds of illnesses. He also complained that they were eating, drinking, sleeping, and using bathrooms in the same area. He argued flies eat with them their food due to the bad hygiene condition.

The following sentences were associated to temporary solution or to the desire to achieve a more permanent solution:

I was scared when a dog entered into my tent and attacked my son at night…. I would rather go back to Syria under bombs which is better than humiliating living condition in the camp.

A female volunteer mentioned how scared she was on the first night at the camp when she lost her family. She can adapt to the temporary situation of the camp but she wanted to finish her educational journey as she has a scholarship to finish her bachelor degree.

A man was a trader of goods and foods, he described the current situation in the camp as bad. At the early stage he tried to sell products from his tent, however, refugee poverty was a limitation of his continuous trade. He argued refugees always want to sleep through the day because they know they will get assistance (30 USA dollar) per month from humanitarian organizations which is maybe more than what they could earn from working any kind of work for a week inside the camp. Also, he mentioned most men do not work compared with women who work outside and inside the camp in order to provide for the family and to run away from conflict and violence with men who are unemployed. He was frustrated as a refugee because he felt that he was imprisoned and had limited human rights. He did not want his children to grow up in a camp and everyday see just desert and white shelters everywhere, he believes the camp leads to bad ethics and he insisted that he will go to back to Syria, even if they will die.

A man stated that each street has a master who is chosen by humanitarian organisations, however, the masters are sometimes not fair when distributing water, solving problems etc., as they give their relatives and friends priority while other refugees are suffering.

An owner of a mini shop argued that refugees fight because of poverty, he mentioned the last fight was at a mall and was due to overcrowding and people suffered from the situation where he indicated sometimes refugees spend many hours inside the mall to get their provisions, and they have to go to the mall more than three times per a day to collect the main items of food that the UNHCR provide. They bought their provisions but keep part of it to buy for other refugees to get cash for milk, clothes, medicine. etc., which the UNHCR does not provide.

Refugees stories and responses indicated a general desire and aspiration to better places, not just better

functional spaces. This aspiration is confirmed by their efforts to adapt their spaces in the camp based on their demands, desire and aspirations. This confirm the initial position, i.e. the vision of a camp as informal city rather than as a temporary solution. Through random and inevitable practices and organization, refugees restructure their built environments in momentous ways. This contrasts with the concept of a functional grid portraited by the current handbooks for the design of refugees' camps, as questioned by the authors in previous studies (Aburamadan and Trillo 2018; Aburamadan 2017; Aburamadan and Trillo 2020).

Conclusions

Currents camps are planned and designed to achieve two main goals: (1) meeting the basic human needs, (2) addressing a quantitative issue. However, because of the protraction over the time of the emergency, refugees' camps should be considered more as urban settlements than as rows of shelters. The urban feature of the refugees' camps recalls the concept of building communities and making sense of the space between buildings and related social ties. Findings from the empirical data allow demonstrating that refugees' prioritization of what is important in the camp is highly connected to the spatial configuration of the camp and shelters and the social interaction that such spatial configuration enables. In the case of the Al Za'atari camp, the evidence suggests that the needs of users are often disregarded in the support the design of spatial and architectural solutions. Thus, the real challenge is to design for people as they were before they experienced an emergency. The paper challenges the current approaches to the spatial management of refugees' camps through a robust methodology and a huge body of new data. It is demonstrated that concepts such as "temporary" or "human needs" can be misleading while applied to spatial configuration which should allow for rebuilding the social glue of "temporarily permanent" communities. This paper supports the argument that even in these places, urban design must challenge marginality and resignation through quality, culture, protection of rights, and support for the incentive of collective services. Architecture, as socially engaged discipline, can contribute to the consolidation of common values such as identity, awareness and appropriation. Accordingly, the paper recommends major changes in the current approach to providing solutions for refugees' shelters and camps. Current design, led by a functionalist approach, should be replaced by a new approach based on place-making principles. Findings from this research could help adjusting the current approach to the refugees' camps and shelters provisions. Potential users are local governments facing the challenge of accommodating refugees, professionals from NGOs and international organization supporting refugees.

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References

Aburamadan R (2017) Developing user-informed specifications for refugees shelter in hot-dry climates : a study of the Al Za'atari Camp in Jordan. School of the Built Environment. Salford University, Salford
Aburamadan R, Trillo C (2018) A novel approach for establishing design criteria for refugees' shelters. New Metropolitan Perspectives Springer, Berlin, pp 422–432
Aburamadan R, Trillo C (2020) Applying design science approach to architectural design development. Front Architect Res 9:216–235
Agier M (2002) Between war and city. Towards an urban anthropology of refugee camps. Ethnography 3:317–341
Agier M (2008) On the margins of the world : the refugee experience today. Cambridge: Cambridge : Polity
Alnsour J, Meaton J (2014) Housing conditions in Palestinian refugee camps, Jordan. Cities 36:65–73
Ashmore J, Babister E, Corsellis T et al (2003) Diversity and adaptation of shelters in transitional settlements for IDPs in Afghanistan. Disasters 27:273–287
Brown B, Altman I, Werner C (2012) Place attachment. International encyclopedia of housing and home, pp 183–188
Brun C (2001) Reterritorilizing the relationship between people and place in refugee studies. Geografiska Annaler: Series B, Human Geography 83:15–25
Certeau Md, Giard L, Mayol P (1998) The practice of everyday life: living and cooking. University Of Minnesota Press, USA
Corsellis T, Vitale A (2005) Transitional settlement: displaced populations. Oxfam, Oxford
Corsellis T, Vitale A (2008) Transitional settlement and reconstruction after natural disaster. Shelter Centre, United Nations
Cresswell T (2004) Place: a short introduction. Blackwell Publishers, Malden
Lintelo DT, Lakshman R, Mansour W et al (2018) Wellbeing and Protracted Urban Displacement: Refugees and Hosts in Jordan and Lebanon. Institute of Development Studies, ACTED Lebanon, IMPACT Initiatives, Brighton
Fábos A, Kibreab G (2009) Urban refugees: introduction. Refuge Can Period Refugees 24:1–19
Flyvbjerg B (2006) Five misunderstandings about case-study research. Qual Inquiry 12:219–245
Foucault M (1982) The subject and power. Crit Inquiry 8:777–795

Hadafi F, Fallahi A (2010) Temporary-housing-respond-to-disasters-in-developing-countries–case-study-iran-ardabil-and-lorestan-province-earthquakes. World Acad Sci Eng Technol 66:1536–1542
Hart J, Paszkiewicz N, Albadra D (2018) Shelter as Home? Syrian Homemaking in Jordanian Refugee Camps. Hum Organ 77:371–380
Herz M (2012) From camp to city: refugee camps of the Western Sahara. Lars Muller, Basel
Jabr H (1989) Housing conditions in the refugee camps of the West Bank. J Refugee Stud 2:75–87
Jussi J and Vorobeva E (2017) Migrants, asylum seekers and refugees in Jordan. Turun yliopiston maantieteen ja geologian laitoksen julkaisuja 10
Kennedy J, Ashmore J, Babister E et al (2008) The Meaning of 'Build Back Better': evidence From Post-Tsunami Aceh and Sri Lanka. J Contingen Crisis Manage 16:24–36
Knox P, Mayer H (2013) Small town sustainability: economic, social, and environmental innovation. Walter de Gruyter, Berlin
Ledwith A (2014) Zaatari: The Instant City
Livingston M, Bailey N, Kearns A (2008) People's attachment to place: the influence of neighbourhood deprivation
Lombard M (2014) Constructing ordinary places: place-making in urban informal settlements in Mexico. Progress Plan 94:1–53
Mah KW, Rivers PL (2016) Refugee housing without exception. Space Cult 19:390–405
Manfield P, Ashmore J, Corsellis T (2004) Design of humanitarian tents for use in cold climates. Build Res Inform 32:368–378
Montanari M, Mehrotra S, Venkatasubramanian N (2007) Architecture for an automatic customized warning system. Intelligence and Security Informatics, 2007 IEEE. pp 32–39
Paszkiewicz N, Fosas D (2019) Reclaiming refugee agency and its implications for shelter design in refugee camps. Comfort at the extremes 2019. Dubai
Picker G, Pasquetti S (2015) Durable camps: the state, the urban, the everyday. City 19:681–688
REACH (2014) Understanding social cohesion and resilience in Jordanian host communities, assessment report June 2014. Jordan: British Embassy Amman: REACH Reliefweb
Sampson R, Gifford SM (2010) Place-making, settlement and well-being: the therapeutic landscapes of recently arrived youth with refugee backgrounds. Health Place 16:116–131
Scannell L, Gifford R (2010) Defining place attachment: a tripartite organizing framework. J Environ Psychol 30:1–10
Schmeidl S (2002) (Human) security dilemmas: long-term implications of the Afghan refugee crisis. Third World Quart 23:7–29
Sharp JP, Philo C, Paddison R et al (2000) Entanglements of power: geographies of domination/resistance. Routledge, London
Simadi FA, Nahar GS (2009) Refugees in Jordan: sociological perspective. Social Responsibil J 5:257–264
Skretteberg R (2019) Trapped in the world's largest refugee camp. Norwegian Refugee Council (NRC), Norway
Stevenson A, Sutton R (2011) There's no place like a refugee camp? Urban planning and participation in the camp context. Refuge: Canada's Periodical on Refugees 28:137–148
UNHCR (2013) UNHCR Global Trends 2012: displacement the new 21st century challenge. UN High Commissioner for Refugees (UNHCR), Geneva
UNHCR (2018) Global trends. Forced displacement in 2018. United Nations High Commissioner for Refugees (UNHCR), Geneva
UNHCR (2019) Jordan: Zaatari Refugee Camp - Infrastructure and Facilities, May 2019. The UN High Commissioner for Refugees (UNHCR), Jordan
UNHCR (2020a) Jordan—Zaatari Refugee Camp. The United Nations High Commissioner for Refugees (UNHCR), Jordan
UNHCR (2020b) Total persons of concern by country of Asylum. https://data2.unhcr.org/en/situations/syria?id=176
UNHCR Innovation (2015) Innovating for Good—Temporary Shelter Design. UNHCR Innovation
WHO (2013) Jordan. Al Zaatari: an overview of health services in the camp. World Health Organisation (WHO), Geneva

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