

## An Analogical Quotation

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### Abstract

*In considering the idea that there should be quotable commonalities in social housing projects, this paper will present an analogical examination of two distinct projects, designed by Alvaro Siza and Kamran Diba, respectively. The emergence of the Shushtar New Town Housing Project in 1977, designed by Iranian architect Kamran Diba, raised a great hope among Iranian architects: the project not only offered a new way to stand against the invasion of the international style architecture, but also presented itself as a flagship of Critical Regionalism in Iranian contemporary housing, as discussed by Kenneth Frampton. However, even while Diba's Shushtar social housing project was still being celebrated with worldwide architectural awards, signs of erosion were gradually emerging in the project. Today, just a few parts of the original design remain, the rest having been demolished by its residents. This issue has left architectural historians and critics with one major question: why should such a supposedly great pioneer project suddenly become one of the biggest architectural disasters in Iranian contemporary housing history? This paper will attempt to respond to this question by looking at Alvaro Siza's Malagueira social housing project in Evora, Portugal, built in the same year as Diba's project. Siza and Diba both carried out their housing projects at a particular historical juncture, using almost the same strategies, ideas, and design concepts. However, although there are incredible similarities between these two projects, a number of Siza's slight considerations, which Diba did not take into account, determined the enduringness of the Malagueira housing, and safeguarded this project from erosion. Exploring the commonalities between these two projects through analogical analysis, while utilising the success of the Malagueira housing project as an exemplar case, this paper posits that the lack of understanding of users' requirements, supervision and social sustainability design features, such as the space for future infrastructure and flexibility, played an essential role in the failure of the Shushtar New Town.*

## Introduction

The discovery of oil in south-west Iran by English engineer William Knox D'Arcy in 1908, and the subsequent creation of the Anglo-Persian Oil Company, resulted in a rapid industrialization of Iran.<sup>1</sup> The sudden development and abundance of jobs caused massive population migration from rural areas to industrial towns.<sup>2</sup> Due to the lack of accommodation and the catastrophic living conditions of workers in slums, the government proposed six development plans in order to provide affordable housing for the migrants.<sup>3</sup> During the period from the 1940s to the 1970s, the Imperial Government built large amounts of low and high-rise social housing around the country, and dedicated more than ten percent of the annual development budget to construction.<sup>4</sup> However, the affordable housing being constructed at this time raised concerns among both architects and the community, with some arguing that the new dwellings were not compatible with Iranian lifestyle, and that the designs were based totally on western ideas and cultural norms. Modern housing like this, and the universalism pursued, troubled the traditional image of the Iranian cities. For this reason, the authorities attempted to find a solution to overcome the sense of disorientation, fading culture, and lack of belonging brought about by the proposed social housing; from 1970 to 1974, a number of international conferences were organized, inviting word leaders in architecture and urban design<sup>5</sup> to attend and discuss the issue.

It can be argued that the Shushtar New Town project, designed by Kamran Diba, was influenced by the outcome of these conferences, and by debates that dominated Iranian architectural communities in the 1960s over the meaning of architecture and *place*. When the first phase of the project was completed in 1977,<sup>6</sup> the result was an outstanding new hybrid town that revived traditional Shushtar architectural characteristics, such as the local brick and roof patterns, in a modern context. Diba's housing project raised a great hope among Iranian architects and authorities: it not only offered a new way to resist the invasion of the international style and its consequences, but it was also considered as a champion of Critical Regionalism in the Iranian contemporary housing history. Furthermore, it became a design pattern for further housing projects, offering solutions for overcoming the prevailing sense of cultural disorientation. Upon its completion, the Shushtar New Town housing project was discussed and admired by prominent local and international architects and critics, most notably Kenneth Frampton. In addition, the project received a number of international awards, including The Aga Khan Award for Architecture in 1986, and was exhibited extensively.

However, even while Diba's Shushtar social housing project was still enjoying worldwide acclaim, signs of erosion were gradually emerging in the project. Today, just a few parts of the original design remain intact, the rest is either transformed or demolished by its residents. This issue, which also occurred in almost the same way in Le Corbusier's Pessac housing in the 1920s, left architectural historians and critics with one major question: why should Diba's project suddenly become one of the worst architectural disasters in Iranian contemporary housing history? What are the design components of social housing that Diba failed to address?

This paper will attempt to respond to these questions through a critical comparison, using Alvaro Siza's Malagueira social housing project in Evora, Portugal, built in the same year as Diba's, as an analogue. At present, both schemes are understood as an attempt to create social housing in line with the discourse of Critical Regionalism. Frampton has given ample attention to these two housing projects, partly because of commonalities between their designs: Siza and Diba both created their housing projects at a particular historical juncture, using almost the same strategies, ideas and design concepts. However, in spite of the similarities between these projects, which I will come back shortly, I would like to posit that a number of Siza's slight elegant considerations, that were dismissed by Diba, underpin the significance of the Malagueira housing.

To this end, I will use "analogical analysis" as a research tool comparing the Shushtar New Town with Malagueira social housing. Analogical analysis is a critical strategy to demonstrate how the thematic

of the culture of building is recorded in reference to program, site, and topology.<sup>7</sup> Similar ideas, interestingly enough, were outlined at a conference entitled “Comparative Critical Analysis of Built Form” in 1970.<sup>8</sup> Accordingly, buildings that belong to a certain functional category, have a similar size, and were built relatively close together in date, and yet were conceived from categorically different cultural perspectives, are compared in terms of their context, hierarchical spatial order, membrane, structure, infrastructure and referential details, illustrating how modern architectural features have been variously inflected.<sup>9</sup> In addition, “the procedure is a method of analysing architecture so as to integrate a comparison at the level of spatial hierarchy with an articulation of built form in terms of typology, tectonic expressivity and referential detailing.”<sup>10</sup> Using analogical analysis, I expect to illuminate the major and slight commonalities and also divergences between Shushtar New Town and the Malagueira housing, aiming to reveal the cause of the success of the Malagueira housing and the failure of Diba’s scheme.

### **The Emergence of Shushtar New Town and the Malagueira housing**

In 1970, when the first international congress, “The Interaction of Tradition and Technology,” took place in Isfahan, Iran, a number of prominent architects attended the congress including Louis Kahn and Buckminster Fuller. The intention was to map challenges involved in the creation of new habitats,<sup>11</sup> and to seek solutions to mediate between local cultures and globalization in the non-western countries that were facing rapid modernisation.<sup>12</sup> From the 1960s to the 1970s, the idea of reviving the city through a return to the customary relation between residents and community became a critical concept in both theory and practice.<sup>13</sup> In addition, many took the demolition of Pruitt-Igoe in March 1972 for the total failure of both modernism in architecture and any “international prescription” for generating new residential environments. Thus, International efforts were being made to accelerate the process of finding ways to cope with the housing issue. The Second International Congress of Architecture, “Towards a Quality of Life,” was held in Persepolis, Iran, in 1974, partially in response to the world energy crisis of the 1970s.<sup>14</sup> In this gathering, local and international architectural theorists proposed solutions for sustainable dwellings. In addition, it was noted at this conference that the goal of capitalism to build mass housing had not been successful, and the design of new dwellings should be compatible with local features and should show consideration for the city fabric.<sup>15</sup> Subsequently, due to Kamran Diba and the Empress Farah’s efforts, the results of these conferences were employed as guidelines for the Iranian architectural community, and were included in the government’s housing design procedure.<sup>16</sup> The outcomes of the Persepolis congress, as presented by the Iranian representatives at the UN conference in Vancouver in 1976, formed the basis of the world’s first “Habitat Bill of Rights,” which was admired by a large number of well-known theorists and practitioners.<sup>17</sup>

As the aforementioned intellectual developments were taking place in 1974, the Karoun Agro-Industrial Company was seeking to provide affordable rental housing to accommodate 6500 families of its working staff, administrative body, and technicians, on 270 hectares.<sup>18</sup> The project was a government-funded housing plan, and was awarded to D.A.Z architects, for whom Kamran Diba was the head of the design team.<sup>19</sup> The primary designated site for the project was next to the company building, in an abandoned, featureless field, 86km away from Shushtar, an ancient city in south-west Iran.<sup>20</sup> In order to utilize Shushtar vernacular building features, Diba proposed a different site approached from the city; as a result, a railway system was suggested to transport the personnel to and from their job site.<sup>21</sup> The D.A.Z Company prepared the plans in 1975, planning the project in five stages. Construction of the first phase, which was intended to house 4200 residents, started in 1976,<sup>22</sup> and was almost completed, with 600 units built between 1977-1978.<sup>23</sup> Due to political unrest and the revolution, construction and building work were paused in 1978, but then continued gradually until 1979.<sup>24</sup> An interview with some former Karoun Agro-Industrial directors reveals that the company faced financial difficulties in 1980s; subsequently, the firm decided to sell its units and retail stores to the public.<sup>25</sup> At present, most of the houses are owned by members of the community, and half of the site, phase one, and also some parts of phase three are functioning.



**Figure 1.** Shushtar New Town, phase 1(Photograph by Rahmatullah Amirjani, 2017).

Meanwhile, after the so-called “white revolution” in Portugal in April 1974, and the end of forty-eight years of dictatorship in the country, the new Portuguese Secretary of State for Housing and Urban Planning attempted to solve the housing shortage issue.<sup>26</sup> The Malagueira housing project was part of a larger social housing project in Evora.<sup>27</sup> The aim was to provide 1200 affordable housing blocks on 27 hectares, for the lower and middle classes, in consideration of the Evora cultural values.<sup>28</sup> Evora’s mayor, Abilio Fernandes, introduced the architect Alvaro Siza to the municipality board as the only choice and solution, due to Siza’s reputation, regional perspective, and housing experience.<sup>29</sup> Siza prepared the primary strategic design concept and his strategy within four months, and the final plans were approved by the board in November 1977.<sup>30</sup> Of the 1200 residential units planned, 1100 units were built prior to July 1997, and construction was completed in 1998.<sup>31</sup> By 1997, dwellers were living under a combination of private and co-op ownership: 60% of the units were owned by cooperatives, 35% were rental and 5% had private owners. In addition, both co-ops and Evora authorities monitored resale prices to restrict speculation, and sub-letting was not permitted.<sup>32</sup> At present, due to the restrictions, as well as government technical inspections and support, the complex remains at a high level of maintenance and well-being.<sup>33</sup>

### **Type and Context**

Both Shushtar New Town and Malagueira housing are clustered low-rise carpet housing with medium density settlements. The former project is laid out on an undulating site near Shushtar, overlooking a river. The latter is located near a gently sloping historic site in Evora, a former Roman city at the heart of Portugal. Despite the difference in altitude – 285 feet (87m) versus 882 feet (269m), respectively – both Shushtar and Evora are known for their extremely hot climate in summer and moderately dry winters. The Malagueira housing and Shushtar New Town units are designed according to a courtyard housing model that provides privacy, in addition to its other well-known typological features. Both schemes comprise a wide range of two to three bedroom houses and two-storey houses, which are the most common among the units, however Diba also dedicated two sectors of his planned project to low-rise units.<sup>34</sup> In addition, both architects designed the dwellings to incorporate the possibility of unit extension. In the case of Malagueira, Siza established building regulations in order to evolve the unit plans, or merge houses that are next to one another.<sup>35</sup> In a similar strategy, Diba incorporated the possibility of growing and extending the Shushtar New Town houses through a few simple modifications to the walls between the units,<sup>36</sup> an idea that was addressed in the ‘Habitat Bill of Rights’ and Vancouver conference.<sup>37</sup> According to Diba, this design strategy not only safeguards the urban fabric against stagnancy but also improves families’ eco-dynamic and social sustainability and diversity.<sup>38</sup>



**Figure 2.** Malagueira housing, (Modified by Rahmatollah Amirjani, adapted from Photo pin, <http://photopin.com/free-photos/malagueira>).

However, a major difference between the two schemes is that the designs were conceived from a different perspective as far as the users are concerned. In order to revive the relationship between designer and user, a “participatory” methodology was the main characteristic of Siza’s design procedure in the Malagueira housing project. Siza started to evolve the concepts and primary Malagueira plans through a number of interviews with the representatives of the future users, authorities, and technicians.<sup>39</sup> Siza frequently stated that the idea of the “user’s engagement” has priority over all other design processes.<sup>40</sup> However, it can be frustrating for an architect to reflect all the users’ demands. According to Siza, sometimes the users’ and authorities’ behaviour was authoritarian and autocratic; they ignored all architectural difficulties and enforce their point of view.<sup>41</sup> Siza suggested that in order to avoid conflict in this time-consuming process, a designer might simply acquiesce to all demands; however, to be part of the real process of engagement, he or she should accept and explore tensions, as the outcomes of these exchanges can be valuable.<sup>42</sup> On the other hand, Diba designed Shushtar New Town based on his own perception and understanding of the region and its vernacular architectural elements. Although the future residents were available for discussion, the final outcome of Diba’s scheme was likely a personal intervention in the expense of excluding the users and the company staff representatives.

### **Circulation, Public vs Private**

Both projects took a different approach to the pedestrian interface, yet each scheme uses similar strategies as far as the articulation of communal versus private space is concerned. Diba reinforced the collective character of Shushtar New Town by designing a series of public walkways that link the private units to various communal facilities, including the parking, plaza, mosque, and park. According to Diba, the streets and open environments responded to the Shushtar hot-dry climate conditions, especially during summer, by preserving the coolness of the night for the hot daytime.<sup>43</sup> Since the design of the alleys in the town was intended to facilitate the residents’ comfort and social interaction, at the time of planning, Diba decided to remove automobile traffic in order to reach the narrowest width of an alley. From Diba’s point of view, this strategy not only made the alleys a safer place and promoted some kind of privacy, but also provided adequate shade and fresh air circulation during summer time.<sup>44</sup> In addition, the design offered several common car parks away from the units at the corners or ends of the streets.<sup>45</sup> Diba stated that the access network of the new town gave the priority to pedestrians, allowing the residents to walk or cycle through the entire town without using cars.<sup>46</sup> However, due to the long walk from a large number of units to the car parks and marketplace, approximately 100-350m, after changes in the ownership of complex, new residents tried to take cars into the pedestrians’ streets and to their houses. Many demolished the external courtyard walls and

replaced the entry doors with gate-like doors to house cars. A number of residents built a courtyard on the outside of the low-rise apartments (Figure 3). This was the beginning of a chain of unexpected modifications that transformed the original design.

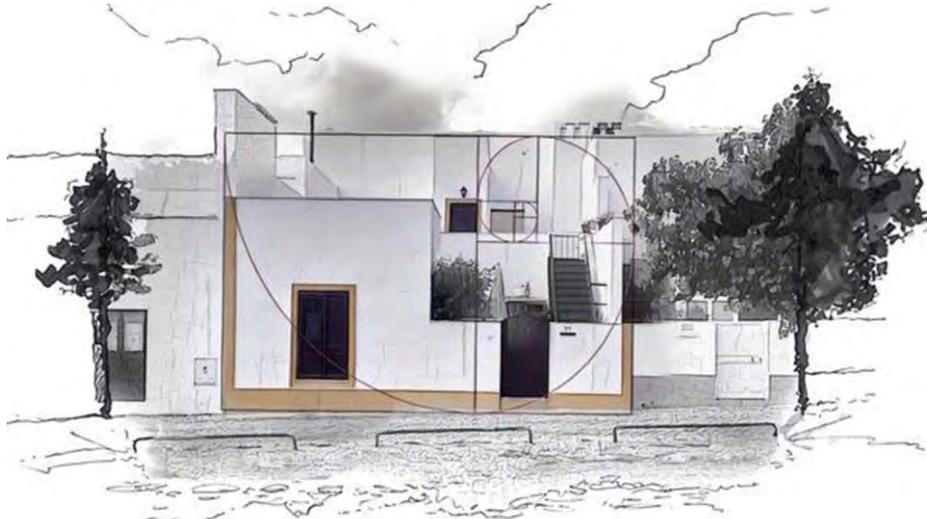
Unlike Diba's Shushtar New Town, Siza designed the alleys for both pedestrian and automobile traffic. In the Malagueira project, Siza planned the streets and circulation according to the people's daily life. Many people utilized certain routes in order to fetch water, go to school, or reach another neighbourhood;<sup>47</sup> over time, people left traces on the ground, and Siza used those paths for the main accesses of the housing, as he suggested "they are the most convenient ways for people."<sup>48</sup> Furthermore, in order to improve access and open-environment quality, Siza recommended ponds and streams on the lower level, and construction of gardens and fountains that improved humidity during summer time.<sup>49</sup> In addition, the low height of the courtyard walls in most units (1.80meters) improved contact between neighbours, ground floor insolation, and also the possibility of visual access, something that culturally would not welcome by the Shushtar residents .<sup>50</sup>



**Figure 3.** Shushtar New Town, newly constructed courtyards next to the apartments (Photograph by Rahmatollah Amirjani, 2012).

### **Structure/Membrane**

Malagueira housing is composed of a frame structure with hybrid cladding. Siza used solid load-bearing concrete frame construction, masonry walls, and concrete roofs in order to form the total Malagueira unit structure.<sup>51</sup> In addition, by using vernacular architectural features of Evora, such as white and orange finish colours, Roman golden proportion and wooden window and door frames, in combination with the layered surfaces that stem from modern design principles, Siza created magnificent and unique tactile values and sense of spirituality. In addition to using elements of 'vernacularisation' in the Malagueira housing, Siza's work can be interpreted as a 'collage of values' inherited from the past and present, resulting in a tactile and spiritual experience, more than a visual and physical one (Figure 4). According to Siza, architects' interventions can avoid placelessness and gain benefits from the local elements by recovering and highlighting pre-existing details, creating a deep sense of place and also establishing local identity for future residents.<sup>52</sup>



**Figure 4.** Malagueira housing, a collage of values (Drawn and modified by Rahmatollah Amirjani, adapted from Guilherme Pianca, 2014.<sup>53</sup>

Similar to the Malagueira housing, Shushtar New Town is comprised of a composite structure and facade elements. Diba used traditional load-bearing brick walls, concrete footing and steel-beams supporting the roof.<sup>54</sup> In larger buildings such as apartments and the plaza, “precast reinforced concrete slabs spanning between the steel beams”<sup>55</sup> were utilized in association with break-walls. However, this approach has not worked for the complex: some parts of the plaza and apartments have collapsed due to high winds and the passage of time. Diba also emulated existing vernacular ambience for the creation of the housing membrane: the design of the facades was based on the reinterpretation of the architectural character of the region and its ancient towns,<sup>56</sup> including Shushtar and the city of Dezful. It can be argued that Diba employed patterns of brick and adobe-works that existed in the cities, which brought a sense of continuity and belonging to the residents through tectonic and tactile experiences. The overall design of Shushtar New Town units also attempts to revive *Sozangar* traditional houses in Dezful, recalling both Louis Kahn’s Indian School of Management<sup>57</sup> and Hassan Fathy’s New Gournahousing.

### Infrastructure

A unique point of the Malagueira housing is that the ‘mediator’ feature of Critical Regionalism is clearly highlighted through the design of infrastructure as an architectural hybrid element.<sup>58</sup> In Malagueira, Siza extended duct-walls in order to transfer and provide fresh water, electricity, TV and telephone cables, and gas pipes.<sup>59</sup> This design concept combines the Roman Aqueducts, an existing local element, with a concrete structure, a modern phenomenon. These hybrid walls are not only presented as an infrastructure, but also function as a gate, façade and landmark, if not a canopy (Figure 5). Siza states that this combination recovers the existing defunct elements via the dynamic feature of modernism.<sup>60</sup> Interestingly enough, this innovative idea can be employed for further infrastructure needs, through extra spaces that have been designated for upcoming technologies and supplies. This strategy is one of the most important features of the housing design, a feature that will guarantee the social sustainability<sup>61</sup> of the complex and safeguard it from erosion and possible changes – the point that Diba missed in the Shushtar new town, and which caused irreparable damage to the town.



**Figure 5.** Tallageira housing, the usage of Roman aqueduct as a concept for the new duct-walls (Drawn and modified by Rahmatollah Amirjani, adapted from Kenneth Frampton, 2000).

In the Shushtar New Town, according to the Agha Khan report of 1986, services including gas, electricity, telephone, sewerage, and water were supplied through underground cables and pipes.<sup>62</sup> However, the investigations highlighted that in the 1990s residents had to change the services due to erosion and new regulations. Subsequently, because of the lack of space for the new systems and the difficulty of accessing the underground lines, a large number of owners had to install the new pipes and cables on the units' facades. The situation became yet more complicated when a number of residents began installing cooling and heating systems. In Shushtar New Town, the units' ventilation during summer relied on fresh northern winds, and no proper or effective consideration were given to heating systems for winter.<sup>63</sup> As a result, residents ruined the walls and window frames to place cooling systems and heating pipes, which transformed and demolished the image of Shushtar New Town (Figure 6).



**Figure 6.** Shushtar New Town, the installation of new gas pipes and cooling system (Photograph by Rahmatollah Amirjani, 2012).

Now, I would like to put the success and failure of the two discussed social housing projects, and also Le Corbusier's Pessac, into historical perspective. Allow me to start with Paul Ricoeur's discourse on "Universal Civilization and National Culture," that underpins Frampton's take on Critical Regionalism.

QUOTATION: What does history have in store for architecture today?

Design competences aside, the success and failure of Siza's and Diba's projects might also relate to the "distance" that their two countries maintained from the consumer culture of capitalism that was disseminated globally by the late 1970s. Of course, the absorption of and desire for modern architecture and lifestyle varies from place to place, even within a single country; however, for the purposes of this paper, it is enough to say that the general cultural tendency in Iran during the 1970s was far more in favour of the most populist aspect of American consumer culture than was the case in Malagueira. For example, this difference can be detected in the Iranian love affair with the automobile, and the esteem for using air conditioning as a modern phenomenon, which directly caused the users' intervention in Shushtar New Town. Arguably, it was the desire for a modern lifestyle and "Westoxification" that justified the transformations of Diba's project. As for Pessac, the residents could not digest Le Corbusier's concept of a "Machine to Live in," and its modern architectural elements i.e. flat roofs and white abstract surfaces. The breakdown of Le Corbusier's project was a part of a wider failure in the reception of modern architecture on both sides of the Atlantic and as part of "the conflict between tradition and modern architecture." Recalling the interviews conducted during the design of the Malagueira housing, we can conclude that Siza was conscious to certain extent of both the residents' capacity for reception of modern ideas and their sympathy toward national identity; it made a balance between the continuity of tradition and the nihilism of modernization, a phenomenon not yet reached in Iran.

## Endnotes

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- <sup>3</sup> Ghasemi & Ghader-Marzi, *Housing Provision Policies*, 124-144.
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- <sup>5</sup> Westbrook and Mozaffari, "A Return to the Beginnings of Regionalism," 720. See also Nigel Westbrook and Ali Mozaffari, "In Search of the Authentic Modern: The Rhetoric of Architecture in Late 20th Century Iran." Unpublished chapter (UK, Oxford: 2013),
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- <sup>14</sup> Westbrook and Mozaffari, "A Return to the Beginnings of Regionalism," 720.
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- <sup>17</sup> Nader Ardalan et al., *Habitat Bill of Rights* (Tehran: Yadavaran Publication, 2011).
- <sup>18</sup> Amir Bani Masoud, *Iranian Contemporary Architecture* (Tehran: Honar-e Memari-e qarn Publication, 2016).
- <sup>19</sup> Westbrook and Mozaffari, "A Return to the Beginnings of Regionalism," 716.
- <sup>20</sup> Shahrvar Khanizad and Farzane Ehsani Moayed, *Kamran Diba and the Human-Friendly Architecture* (Tehran: Honar-e Memari-e qarn Publication, 2014). See also The Agha Khan Award for Architecture, "Shushtar New Town," 9.
- <sup>21</sup> The Agha Khan Award for Architecture, "Shushtar New Town," 9.
- <sup>22</sup> The Agha Khan Award for Architecture, "Shushtar New Town," 9.
- <sup>23</sup> The Agha Khan Award for Architecture, "Shushtar New Town," 1-48.
- <sup>24</sup> The Agha Khan Award for Architecture, "Shushtar New Town," 9-16.
- <sup>25</sup> Rahmatollah Amirjani, Interviews conducted July 2015 with former Karoun Agro-Industrial managers Mostafa Bakhtiari and Reza Mosavi-e Shush.
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- <sup>28</sup> Roger Sherwood, "Quinta da Malagueira," *Housing Prototypes*, [http://housingprototypes.org/project?File\\_No=POR003](http://housingprototypes.org/project?File_No=POR003).
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- <sup>33</sup> Sherwood, "Quinta da Malagueira."
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- <sup>35</sup> Sherwood, "Quinta da Malagueira."
- <sup>36</sup> Khanizad and Ehsani Moayed, *Kamran Diba and the Human-Friendly Architecture*, 208.
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- <sup>39</sup> Mota, "Between Populism and Dogma," 52
- <sup>40</sup> Mota, "Between Populism and Dogma," 52
- <sup>41</sup> Mota, "Between Populism and Dogma," 52
- <sup>42</sup> Mota, "Between Populism and Dogma," 52
- <sup>43</sup> Diba, "The Recent Housing Boom in Iran – Lessons to Remember," 42.
- <sup>44</sup> Diba, 'The Recent Housing Boom in Iran – Lessons to Remember,' 43.
- <sup>45</sup> Daneshvar, *A Garden Between Two Streets*, 195, See also the phase one plan, The Agha Khan Award for Architecture, "Shushtar New Town," 161.
- <sup>46</sup> Daneshvar, *A Garden Between Two Streets*, 195.
- <sup>47</sup> Kenneth Frampton, *Alvaro Siza: complete works* (London: Phaidon, 2000).
- <sup>48</sup> Frampton, *Alvaro Siza*, 161.
- <sup>49</sup> Zapatel, "The Malagueira Quarter in Évora, Portugal."
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- <sup>61</sup> Cesare Sposito, "Identity, flexibility and sustainability for the new social housing," *Techne: Journal of Technology for Architecture and Environment*, 4(2012): 153-159.
- <sup>62</sup> The Agha Khan Award for Architecture, "Shushtar New Town," 20.
- <sup>63</sup> The Agha Khan Award for Architecture, "Shushtar New Town," 7.

