The Disaster Context of Bam (SE Iran) and its Conditions: A Context neither Static nor Dynamic

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"Context" has been a major focus of archaeological theoretical studies since the early days of processualism or "New Archaeology". In both processual and post-processual archaeology, context is more than just a space in which material data can be identified. Instead, it is a set of spatial, chronological, and socio-cultural terms set by the archaeologist through which (and through whom) material culture obtains meaning and function.
In theoretical treatises, context has been divided into two types: dynamic or static. According to an ethno-archaeological research in Bam disaster context (SE Iran) and a pilot area in Pakistani Jamu and Kashmir, a new kind of context is introduced in this article which can be located in the spectrum between dynamic and static. It can be hypothesized that this new kind of context (Disaster context) is not particular and can be observed in sites which have passed the process of becoming an ancient site.

Key words: *dynamic context, static context, Disaster context, Bam, Kashmir*

Introduction

Context has been a major focus of archaeological theoretical studies since the early days of processualism or "New Archaeology" (Salmon 1982, Hegmon 2003). In processual and later in post-processual archaeology, *"context"* was defined as being more than just a space in which material data are collected and identified (Renfrew 1983). Instead, it is a set of spatial, chronological, and socio-cultural terms set by the archaeologist through which (and through whom) material culture obtains meaning and function (Matthews 1999: 262). Context can also be defined as the relevant environment of the objects (Hodder 1986: 139, Smart Martin 1996: 6). *"Context"*, so defined, is the primary focus of several approaches within archaeology (Butzer 1980: 418) as it relates to everyday cultural actions (Matthews 1999). In both processualism and post-processualism, *"context"* is usually divided into two types – static and dynamic – and there is often no middle-ground between these two standpoints. It seems that change in archaeological theories for description and interpretation of *"contexts"* has been an evolution mostly in the way we view material data rather than how we define the *"context"* in which these data are found. We believe that context is more fluid and is both static and dynamic depending upon how it is viewed.

In the present case, our thinking about types of *context* derived from four seasons of ethno-archaeological and contemporary archaeological research at the city of Bam in south-eastern Iran after its earthquake in 2003. As the objects' context was a distinctive parameter – i.e., within a Disaster context[2] , – the research began paying close attention to the issue of defining context. We were forced to engage with the "simple" task of choosing the type of context that best explained post-earthquake Bam: was this context dynamic or static? It quickly became apparent that the Bam Disaster context is a special context which does not fit with the normal definitions presented in archaeological literature. Accordingly, in this article the characteristics of the Bam Disaster context will be discussed, and a new kind of context will be presented.

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[1-] In this article, Disaster context is described as a context destroyed or abandoned by natural disasters.

Bam disaster context: particular or general?

On December 26, 2003, an earthquake measuring 6.6-6.8 (Mw) on the Richter Scale struck the ancient city of Bam in south-eastern Iran and destroyed more than 20,000 houses (85% of which were made of un-reinforced mud-bricks) and left 40,000 people dead and a further 100,000 people homeless (Bihung *et al*. 2004; Elpel 2005: 25; Mann 2005: 3). Immediately after the disaster, significant changes in the socio-cultural landscape of the city were observed. Furniture and other belongings which no longer held their original functions laid scattered among the debris. The material culture of daily life and the socio-economic structures in which they functioned were changed by the disaster and in the days soon after (Garazhian and Papoli 2008). A fortnight after the earthquake, the residents of Bam who survived returned to what had previously been their homes and began to clean up the mess in order to carry on living. However, they had to adopt new patterns of behavior in order to adapt to this altered environment (cf. Torrence 1999; Torrence and Grattan 2002).

Forty days after the disaster, the first season of the "Bam Ethno-archaeology and contemporary archaeology Project" was begun. The short-term dramatic changes were readily observable in Bam; thus, the researchers' first program was to gather data, most especially observing and documenting survivors' reactions to the new conditions. The other seasons of the project were conducted in Bam two, six, seventeen, and thirty-two months after the disaster. Data were gathered under five main categories of population replacement: domestic architecture, material culture, graveyards and marketing patterns.

Explaining and interpreting the data led us to think about the kind of context we have worked on. Many of the agents were dead although some had survived, thus the data still had emic meaning even after the buildings were destroyed and left to ruin. Thus, what kind of context was the Bam Disaster context? Should we eventually classify it in this binary system of static vs. dynamic contexts? After classifying the data, it was hypothesized that the Bam context was neither dynamic nor static. However, it was important to know whether the Bam context was unique or whether this kind of context could be observed in other regions.

In order to determine whether the Bam disaster context could be seen in other areas, the "Bam Ethno-archaeology and contemporary archaeology Project" went to Pakistan exactly one year after the Kashmir earthquake of 2005 which killed over 80,000 people and left over 3 million people homeless. Studying the Kashmir Disaster context, it became clear that the disaster context noted at Bam could be observed in Kashmir too. In fact it was proposed that the special characteristics of these two situations form the general indicators of Disaster contexts. Before turning to the indicators of this new definition in context studies, the classic definitions of context in archaeology and ethno-archaeology will be discussed.

Types of Contexts in Archaeology and Ethno-archaeology

Archaeology generally divides the term "context" into three basic types: dynamic, static, and systemic. *A dynamic context* (or "living context") is a particular situation in which an act can be observed and in which hypotheses can be tested based on contemporary conditions. In such contexts, agents are active and alive, thus interviewing and receiving direct information is possible (see Binford 1983). Importantly, dynamic contexts are the common ground between archaeology and other social sciences (see Chaplier 2006), having entered into archaeology from anthropology. Anthropologists call "dynamic" a context in which human behaviours, everyday life and ethnic relations are readily observable (Doughty 2005: 304). Dynamic contexts are studied in archaeology (usually as "ethno-archaeology") because the models which are induced from these situations can be used in interpreting the more silent information of static contexts (Lucas 2004: 34).

A static context is the basis of most archaeological researches and is grounded on the supposition that static contexts used to be dynamic sometime in the past (Murray 1999: 16). In static contexts, the agent is absent, so the material remains made and used by agents have lost much of their emic meaning due

to long-term site formation processes. Furthermore, the function and structure of objects is also missing. Therefore, archaeologists attempt to "reconstruct" the meaning, function, and structure of objects based on contextual conditions (Binford 1962: 217; Matthews 2004; Bailey 2006). When archaeological phenomena are recovered from a static context, it seems likely that the artefacts relate to past events and behaviours (Binford 1987: 393) .In this light, the dynamics of past assemblages are a matter of understanding relationships between artefacts and their contexts (Gowlett 1997).

A systemic context is specific to a branch of archaeology interested in the behavioural correlates of material culture (see Schiffer 1972). As Lewis Binford (1981) states, Given Schiffer's view of a cultural system placing trash in a dump is a C-transform **(is this a citation? If so you should add "…." and page numbers; if this is not a citation, the sentence is rather unclear)**; as such, it is a distorting action, marking the transition between systemic context and archaeological context for the items discarded. They were in fact "used" at another place, at a prior time, and as such the presence of the item in the dump is a distortion of such a prior state. From this viewpoint, an archaeological context is seen as the remains of a behavioural and communicative system (see Schiffer 1988). According to this definition, systemic contexts are dynamic behaviours that have been fossilised in the process of time. Concentrating on taphonomy as a research aim in the 1970s and 1980s, systemic contexts were also equated to dynamic contexts in ethno-archaeological literature (Gorecki 1985). Schiffer (1972) argued that it is necessary to study site formation processes in order to reconstruct systemic contexts, which would make it possible to understand the rate of change in archaeological context over time. Some post-processual archaeologists agreed with this approach (Lucas 2005) but argued that in addition to formation processes, contemporary cultural processes also affect archaeological contexts. They also felt that of the totality of natural and cultural forces affecting archaeological context could not be addressed on a practical level.

Context: From New Archaeology to Post-Processualism

Dynamic vs. static contexts were terms first discussed by Lewis Binford in his formation of the "New Archaeology" school, later becoming popular throughout processual archaeology. Binford believed that archaeologists obtain data in a dead and static form from archaeological contexts (see Binford 1987). However, he also believed that such reconstructions are reliable only when tested and acknowledged in a dynamic context. Based on this presupposition, Binford (1978) and others (e.g., Watson 1979) began ethno-archaeological research and a new approach utilizing data from dynamic contexts as analogies through which archaeologists could derive meaning from "static" archaeological data.

New Archaeology believes that static data are fragments of an image or snapshots taken of a dynamic culture, and that by reconstructing the broken pieces, we can study past dynamic systems. Because these pieces derive from non-linear patterns, they can lead us to non-linear systems (Brown *et al.* 2005). The need for using dynamic data in archaeology only appears when the archaeologist is faced with an absence of meaning in a static context (Manning 1993). In order to make archaeology scientific, the New Archaeology wanted to dissolve archaeology's major weakness: i.e., the non-testability of its data (Binford 1985).

Methodologically, Middle Range Theory has been used to check ethnological and archaeological analogies (Raab and Goodyear 1984); Binford and Binford (1968) conceived it as a bridge that can define formal, spatial, and chronological similarities between the contextual and material data. In the descriptive step, ethnological data which are described according to Middle Range Theory are usually used in systemic analyses of the society (Lowe and Barth 1980) or explain the change and interaction types in dynamic contexts (Ogundele 2005, Varien and Mills 1997 , David and Kramer 2001: 25).

"Behavioral archaeologists" are also interested in ways to define "context" and the static correlates of living and dynamic behaviours. On the one hand, a systemic context is both the living behaviours captured in spatially-associated elements of a systemic process (Grebinger 1978:150) and it is an archaeological context created through site formation processes over time (Brooks 1982, Schiffer 1983).

However, "systemic context" is a very complicated and inefficient concept. It seeks to understand living behaviours yet also believes that reconstructing them is almost impossible due to the plethora of natural and cultural processes which led to material data becoming deposited in an archaeological context. Although behavioural archaeology claims to be the study of material objects regardless of time or space (Reid *et al.* 1975: 864(, it is inherently focused on studying formation processes which have both spatial and chronological dimensions (see Schiffer and Lamotta 2001). Non-behavioural archaeologists have also misunderstood the exact meaning of "systemic context", using it in place of dynamic context in some ethno-archaeological texts (see Gorecki 1985).

Post-modern or post-processual archaeologists of the 1980s and 1990s began to examine the role of people in the formation and interpretation of archaeological data by putting emphasis on dynamism and dynamic contexts (Dyson 1993).

Post-modern archaeology believes in the dynamism of interpretation; i.e. it believes in putting multiple "narrations" together based on archaeological data in order to reach a more dynamic meaning (Pearson and Thomas 1994; see Vanpool and Vanpool 1999: 39.(Just as words have multiple meanings but make sense in the context of sentence, so too material symbols can be better understood when we encounter them in particular physical settings (Thomas 2000: 9). This kind of archaeology is less inclined to use analogy (see Politis 2003), although it rarely ignores analogic data either. Generally speaking, most of what post-processual archaeologists have written in relation to the interpretation of archaeological data can be classified into ethno-archaeological and dynamic context territory. Therefore, although it has been using classic archaeological views regarding contexts until now, contemporary archaeology needs to re-examine how we represent interpretations related to the context of material culture.

Neither modern nor post-modern approaches to archaeology have effectively moved beyond the classic "dynamic vs. static" dichotomy in discussions of context. Even Schiffer's attempt at a "systemic" middle-ground focused more upon the method for data collection and interpretation rather than on proposing new ways of conceiving of contexts. Ethno-archaeology offers the opportunity to create and expand upon the analogies that can be used to interpret the past (Cunnigham 2003: 392), but it can also inform us about the idea of contexts. In this article, the ethno-archaeology of a disaster context at Bam after the earthquake will be presented without concern for Middle Range Theory and analogy and beyond modern and post-modern definitions of context.

Bam: A Disaster context

As mentioned above, one of the key questions facing the investigators concerned the type and status of the context. Though the sample was a contemporary one, its conditions of destruction and disused ruins could not easily be assigned a "living" context. On the other hand, Bam could not be entirely described as a dead context either, because some of its inhabitants were still alive and continue to use the destroyed landscape. The main question about Bam's "context" was: what features does Bam Disaster context have and what type of context is it? This question was also tested in a pilot region (in Kashmir, Pakistan; see below) and the similarities between these two regions were compared. In order to understand the type of context, its conditions (i.e., condition of agents, data and their definitions) were studied.

First, 80% of domestic buildings and the civil structure of Bam were totally ruined and transformed into debris in about 12 seconds. These ruined buildings were left in situ at first after removing bodies and recovering (or looting) usable

objects. Residents temporarily lived near to their ex-houses, leading to the formation of a debris and rubble layer above the collapse. After impermanent settling of residents, governmental facilities were employed for dumping debris and transferring them to the suburb. Despite presenting facilities, un-dumped areas and un-looted structures could still be observed in the city three years after the disaster, generally places in which all the residents had died and where inheritors had not yet removed debris (fig 1, 2).

In 2006, the Bam research team began an ethno-archaeological study in the Kashmir Province of Pakistan after the earthquake of October 8, 2005, which claimed 80,000 dead by some estimates (Avouac et al. 2006). Studies in Bālākut (fig 3) and Mozaffar Ābād in Kashmir Province suggests that if there had been fewer mechanized equipment for debris transferring, the rubble would have been left where it collapsed. For example, in Mozaffar Ābād , the survivors set up tents over or just beside the debris of their ex-houses. Employing labourers to build permanent or semi-permanent constructions was observed in some cases. In both contexts, the survivors preferred to stay and continue living on the debris of their destroyed houses. Five years after the disaster in Bam, only the houses which had no surviving owners had not been flattened and built again.

According to the foregoing observations in Bam and Kashmir, disasters ruined the residential buildings and civil structures, but the ruins would have not collapsed without mechanized equipment or adequate motive to do so.

Second, the Bam earthquake caused the death of more than half the city's residents. However, the rest gradually started living in the city again. Remaining



Fig1. *Layer of rubble and debris with remains of material culture generated by earthquake, Bam, Iran*

alive, some agents still have in mind the meaning of destroyed buildings and material culture, although that meaning is often transformed by the survivors (see Garazhian and Papoli 2008). The case studied in Kashmir (figure 4) displays similar transformation in meanings from before and after the earthquake. Changes in the needs of agents after the earthquake and in their daily activity changed the material and contextual data.

continue to transform the accumulated debris and objects in the city and suburbs. Cultural and natural changes are not peculiar to a specific form of context; they appear in both dynamic and static contexts.

Fourth, there is an active process in both disaster contexts in which the survivors define and make



Fig2. *Layer of rubble and debris with remains of material culture generated by earthquake, Bam, Iran*

Third, there is an active relationship between the Disaster context data and the living agents in Bam. It means that in the first days after the disaster, survivors tried to pull out objects and dead bodies; thus, they disturbed the layer which was created by a natural disaster. Three years after the disaster, survivors are still involved in reclamation of usable materials from un-removed debris and rubble accumulation; so they change the material form and meaning of the data through re-use and recycling. On the other hand, natural factors and processes like atmospheric elements and post-quake tremors

new signs laden with cultural meaning, especially in graveyards. Every conceivable object has been used to mark a person's grave in Bam, including photos, ladders, pots, etc. Furthermore, standing doors without walls are the sign that the owners of a house survived. Some graves in Balakut, Pakistan, were observed in which there are no bodies and the gravestones are simply the marker of a person whose body was not found among the debris. It seems that new signs are characteristic of disaster contexts and one of the key features of the relationship between surviving agents and material culture.

Both Bam and Kashmir Disaster contexts have features of both static and dynamic contexts. On the one hand, destruction of the living realm makes them near to static contexts; and on the other hand, surviving agents and their intervention in material data make the Disaster context near to the living context definition. According to static or dynamic contexts definitions presented so far, Disaster context does not fit into any context posed in archaeological literature.



Fig3. *Layer of rubble and debris with remains of material culture generated by earthquake, Balakut, Pakistan*



Fig4. *recovered material and re-use of them, Mozaffarabad, Pakistan Kashmir*

Discussion: a Context in the spectrum from dynamic to static

The concept of "context" has been victimized by the structuralistic thinking of the New Archaeology; "context" has always been dead or living, static or dynamic. This dichotomous vision is then applied to data and their related parts besides context. Besides, actual research includes ethnographic and experimental studies designated to provide an understanding of how particular elements of material culture may have been used or produced in living contexts (Wylie 2002 :251). Furthermore, archaeological processes are usually studied over the *long durée*; thus, short term processes are often omitted or ignored. Studying Bam Disaster context in several junctures made it possible to study short-term but influential processes. Context is therefore not simply a bounded entity set in the past, but an aspect of the relationship between past and the present (Thomas 2000: 9).

A Disaster context cannot be classified under static or dynamic titles. This context lies in a spectrum between dead and living; so it is not black or white. Over time, agents (depending on the conditions) might go back to their lives or might leave the disastrous area. In this way, the Disaster context will gradually approach one side of the spectrum: static or dynamic.

If we accept the supposition that every site has faced a dramatic change during the process of becoming archaeological (Cameron 1993), we discover that the contexts discussed here are not extraordinary phenomena, merely on a different scale. It can be hypothesized that every ancient site in the process of becoming ancient has been abandoned and it seems that sites would not be abandoned in normal conditions.

Each ancient layer has experienced being both static and dynamic in the process of site formation, which might transform into a long term process because of disaster situation and its agents. Furthermore, the inherent belief in archaeology that ancient people suddenly left a site, forming pristine layers, seems to be an inadmissible one without any concern for agents and leaving conditions. It is very important to study and identify the process of leaving a site in order to understand the meaning and context of material data. Omitting some parts of the process in which the context used to be in a static and dynamic spectrum, leads to insufficiency in giving function and meaning to the data.

It seems that archaeology's basic problem is deriving question from archaeological contexts and testing it in an ethnographic context. The silence of archaeological data forms a one-sided relationship between archaeologist and cultural materials. An archaeologist enters a dynamic context and studies it with the same mentality of silence and absolute data as a static context. By studying static contexts from dynamic processes, archaeologists can derive abstract and inconspicuous analogies, but they cannot directly apply them to material data in order to understand ancient structure, function and meaning. By taking lessons learned in a dynamic context, archaeologists can give voice to silent data. Furthermore, ethno-archaeological research is "diachronic" in that it compares the present to the past, but it can only study short-term processes and generalize them to explain long-term processes (Metcalf and Huntington 1991). In contrast, archaeology is truly diachronic in that it can only observe long-term processes. Deriving questions from an archaeological context and dictating them to an ethnographic context omits the study and modelling of affective medium- and short-term processes.

According to the hypotheses and questions, a researcher can study short-term to long-term processes in a Disaster context. Using this method provides understanding of a situation that stands between dynamic and static contexts. Modelling a Disaster context allows archaeologists to understand the contexts of objects from the time they were "abandoned" to the time they became an ancient site. "Disaster context" is suggested as the title of this context.

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