Chapter 6 –

CONCLUSIONS

The researcher has observed the socio-political and socio-cultural processes at the regional level, with the help of material culture recovered from select sites across western India. The conclusion summarises the findings generated from the data analysis and discussion presented in earlier chapters.

1. The study of the ceramics from the explored and excavated ancient settlements in western India revealed contact between 3rd and 10th century A.D., between west Asia and western India. This included both Glazed and Un-Glazed Wares, such as, the Sasanian Glazed Ware, Turquoise Glazed Ware, Tin Glazed varieties (Opaque Tin Glazed and Turquoise Splashed Wares), Lead Glazed variety (Hatched Sgraffiato, Champlevé Sgraffiato, and Monochrome Sgraffiatos), Torpedo Jars (PWWS, Buff, and Gritty varieties), Eggshell Wares (White, and Grey), and Buff Plain and Incised Ware.
2. Six hundred and eighty-two ceramic sherds were macroscopically recorded and identified as West Asian, out of which 143 were sampled for the thin-section analysis as representative samples. These were characterised into twelve different Petro-Fabric Groups with two Sub-Groups (4a, and 8a respectively). From within the twelve Petro-Fabric groups, four distinct major groups were identified based on the mineralogy of the non-plastic inclusions.
3. The four distinct groups based on mineralogy are characterised as: Group (i) Crypto-Crystalline silica dominant (PFGs 4 and 4a); Group (ii) Quartz dominant (PFGs 1, 2, and 3); Group (iii) Quartz-Feldspar dominant (PFGs 9, 10, 11, and 12); and Group (iv) Feldspar dominant (PFGs 5, 6, 7, 8, and 8a).
4. Torpedo Jars typically from Susiana region (south-west Iran) fall under PFGs 4 and 4a dominated by crypto-crystalline silica inclusions. Whereas Torpedo Jar (PWWS and Buff varieties) found from western India fall under PFGs 1, and 2 respectively which were Quartz dominant.
5. Petro-Fabric Groups 9, 10, and 11, represented by glazed wares have similarities with the Basra fabrics, and may have been produced there or in a similar geological zone.

6. Early Islamic material is found exclusively from *Dakshina Gujarat* and Maharashtra. In contrast the Sasanian material are widespread throughout Western India.

The researcher here discusses the resultant dispersion of west Asian material to the Indian sub-continent via the Indian Ocean Trade. 'Cultural Contact' has many facets and this is truly shown in the contact between West Asia and the Indian sub-continent. It is difficult to paint a black and white picture where there are many grey areas as the contacts and the types of contact are so varied and may or may not be inter-connected. This means that, sometimes, even if there are political tensions between the two areas (see Section 2.1.2, 2.1.3), there was still an exchange, which occurred at cultural level (see Section 2.3).

The effects of this strained political relationship between the Arab Caliphate and the various kingdoms in western India did affect the exchange of tangible material spatially. There is a shift and change in commerce, which is mirrored by the political situation within West Asia as well as Western India. Trade and Commerce always brought in not only wealth into the territories but also an intermingling of people of different cultures. Nevertheless, the Arab invasions were disruptive to the economic processes, especially in the Gujarat region (south Gujarat being the exception) as evident from the complete absence of West Asian material datable to the 8th and 10th century A.D. This may be attributed to the probability of a fall in demand, in an increasingly de-centralised economy that existed in Gujarat during this time.

However, the situation in *Dakshina Gujarat*-Maharashtra was different as evidenced by regular trade especially along port sites such as Sanjan and Chaul which go well into the 10th century A.D. and beyond. This is indicated by the rich repertoire of West Asian ceramics found in Chaul, and Sanjan. It appears that there could be a complete absence of the Samarran Wares in Gujarat even in the succeeding archaeological researches (except *Dakshina Gujarat*). Diaspora of the group of Iranians to the Indian sub-continent would have led to the emergence of an endogamic group

currently known as the Parsis who have had a deep impact on the Indian nation from the medieval to the modern times.

Much of the West Asian ceramic assemblage was dominated by Torpedo Jars, mostly belonging to the PWWS variety, which were made from a single source area (geological terrain) as evidenced from the thin-section studies (mineralogy and texture of the non-plastic inclusions). This petro-fabric is identified uniformly from all the examined sites in western India. The results of the analysis of Torpedo Jars and 'Honeycomb' Pithos Storage Jars from Susiana plains suggest that they belong to a completely different group in terms of its mineralogical composition, which could be considered as a regional profile. These Petro-Fabric Groups (4, and 4a) are mineralogically (dominated by crypto-crystalline silica) and texturally different from the Petro Fabric Groups (1 and 2) represented by Torpedo Jars found from Western India.

Eggshell wares were found only from *Dakshin Gujarat*-Maharashtra region and are completely absent from the other regions of Gujarat. The Grey Eggshell ware found from Chaul has a different Petro-Fabric Group compared to the White Eggshell ware. The White Eggshell ware has a much cleaner matrix with occasional haematite patches and low-density quartz fabric like Petro Fabric G from Sanjan (Krishnan 2011). The Buff Plain and Incised Wares also overlap with the Petro Fabric Group related to the White Eggshell Ware. Grey Eggshell ware is 'coarser' with sub angular quartz fabric with much higher density indicating that they belong to a single source area. Further research needs to be carried out to identify its production localities.

The Glazed Wares, namely, Turquoise Splashed Tin Glazed Ware, Turquoise Glazed Ware, Tin Glazed Ware show considerable overlap with similar geological source (Quartz-Feldspar group). The Petro-Fabric Groups 9, 10, and 11, may be derived from sources within the Tigris-Euphrates belt which are typical of the 'Basra' related production centre or centres (Map 1.1). The Sasanian Glazed Ware also falls under the same Petro-Fabric Group, however, reveals a varied geological sources which is Quartz

dominated, Quartz-Feldspar in more or less equal proportions and Feldspar dominated. This indicates that, in the Sasanian time-period, different regions or areas within west Asia were in contact with Western India. The mineralogy of the Sgraffiato Wares (Petro-Fabric Groups 8 and 8a) is similar. The Sgraffiato Wares were most likely made in southern Iran near the Persian Gulf's approach as evident from the archaeological record, (Stein 1937).

Although different sources are seen, it is still difficult to precisely identify production centres. This is due to difficulties in identifying precise distinguishing features within the mineralogical composition of the Petro-Fabric Groups. But what is certain is that, when compared with the mineralogy and textural features of indigenous wares of western India, these groups stand separate indicating their West Asian origin.

Future Scope of Research

This research marks a novel approach towards understanding the dynamism of trade networks that existed during the Late Historic/Early Medieval in Western India by incorporating methodological frameworks that included traditional and scientific approaches. There have been limited studies to understand this important dimension of Indian Ocean Trade, especially by incorporating multi-disciplinary approaches. To understand the intricacies of this complex dimension, the researcher undertook field surveys, and collected representative samples from select excavated sites in Western India. The significant ones were subjected to thin-section analysis whose results opened up new avenues of interpretations of the complex nature of exchange networks existed between West Asia and Western India.

This research was, however, characterised by few limitations. Archaeological researches for understanding the dynamism of Late Historic/Early Medieval periods is largely limited to epigraphic, art historical, and numismatic dimensions. Such a preferential bias led to a limited number of sites being subjected to archaeological excavations. This has in turn led to a paucity of available archaeological material that can be subjected to investigations. Further, the methodological approaches adopted in this

study is subjected to certain shortcomings. Although the adoption of thin-section analysis yielded significant results, it was found that the number of non-plastic inclusions within certain Petro-Fabric Groups is too sparse to reconstruct a comprehensive picture of the ceramic production techniques and their production centres. However, despite its limitation, the study significantly addresses the issues concerning West Asian contact with Western India. Despite the limitations, the thin-section analysis points to a larger possibility of further research. It may not be out of place here to state that a raw material source mapping followed by comparing the raw material mineralogy and texture from various zones and buffer zones would enable one to throw more light into the provenance analysis. However, this requires further incorporation of diverse scientific analysis techniques to verify the existing finds and validate them.