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Commodification and the formation of Early Neolithic social identity. The issues as seen from the southern Jordanian Highlands

dedicated to late Ali Mutlaq and Ghaithah[1]

Hans Georg K. Gebel

Abstract: Like in other areas of the Early Neolithic Near East, the different sectors of developing sedentary life in the southern Jordanian communities supported each other by new patterns in human behaviour, territoriality, reciprocity, and commodification (establishment of productive milieus and value systems), established through the confined sedentary and pastoral territories in the environmental, technological, social, cognitive and ritual spheres. South Jordan witnessed these developments rather late. This, by many means preliminary article introduces the novel and holistic commodification concept or explanatory framework, rather than domestication and other prime-mover models, for explaining Neolithic evolution; it develops a different understanding of commodification than introduced by Appadurai and Kopytoff in 1986. Definitions and dynamics of commodification and confined reciprocity in early village life are discussed, and then illustrated by examples from Ba'ja/Basta, South Jordan. The Ba'ja community (Late Pre-Pottery Neolithic B, 2nd half of the 8th mil. BC) flourished in a secluded intramontane location in the rugged sandstone formations of the Petra Area. Its early village reciprocity – generated by the commodification processes of productive milieus – results from interacting factors of landscape types, settlement pattern, resources, goods and labour, internal settlement/house organisation, social identities, technological and ideological innovation, and as these relate to the remaining late forager elements of the region. The need for, and use of, corporate and pacifying behaviour and strategies in the Late PPNB mega-site economies in Jordan is analyzed and illustrated by a new commodity, the sandstone rings of Ba'ja, which were a commodity coupon that helped establish and process further corporate identity by reciprocal acts. The present article stresses that commodities (definitions cf. below) and consumption must be seen beyond their production and biographical aspects as the key drivers of the upcoming sedentary and pastoral reciprocity, respectively for Neolithization, and raises the question of whether or not commodifications' early surplus production not only provided and secured supplies and served a confined reciprocity, but also prepared for early markets and villages' wealth by transferring suitable elements of generalized reciprocity into the Early Neolithic confined reciprocity. This article also emphasizes the imperative need for future human ethological studies to develop Near Eastern Neolithic research beyond its present limits, and for the methodological tools to secure the empiric basis and interdisciplinarity of this research. The ultimate aim of such research is to identify the

[1] I dedicate this article to the late Ali Mutlaq al-Bdul (Samahin Clan, Petra/ at-Thughra, Jordan) and his wife, the late Ghaithah. Ali was already in bad health in 1984 when he started the excavation of a Nabatean cistern near his tent in at-Thughra southwest of Petra. At that time we felt that he intended this as his legacy to the shepherds of the area. He emptied the almost 2000 year old and over 100 cubic metre cistern of sediments and cleaned its tributary channels, allowing it to once again collect run-off waters. He explicitly said that it should be used by all – not just his own family – for increasing the area's herds of goats and sheep. Exhausted and sick, but honoured, he died in 1985. I knew him for just the twinkling of an eye; but I can never forget the closeness of the shared trust and respect. I thought about him often while writing this article on sharing and commodification.

forceful commodification, territorialisation, and reciprocity processes which established sedentary life with its potentially violent tangible and intangible territories of the Homo neolithicus, pacified by new mechanisms of integration, mutuality, and balance, thus uncovering the heritage of our modern ethos.

Zusammenfassung: Wie in anderen Regionen des frühen Neolithikums im Nahen Osten haben sich auch bei den Gemeinschaften Südjordaniens, die zum sesshaften und/ oder pastoralen Leben übergingen, neue Formen menschlichen Verhaltens (Ethos), der Territorialität, der Reziprozität sowie der Kommodifizierung (Entstehung produktiver Milieus sowie von Werte- und Warensystemen) gegenseitig verstärkt – Entwicklungen, die sich im Bereich der Umwelt und Technologie, im Sozialen, Kognitiven und Rituellen durch die Sesshaftigkeit oder pastoralen Gebietsansprüche in den jetzt begrenzten Territorien etablieren konnten. In Südjordanien sind diese Entwicklungen relativ spät bezeugt. Anstatt die Neolithisierung durch Domestikationsprozesse oder andere primäre Auslöser zu erklären, wird in diesem intitialen Beitrag das neuartige und ganzheitliche Konzept bzw. der Erklärungsansatz der Kommodifizierung vorgeschlagen; er stellt ein anderes Kommodifizierungsverständnis – angepaßt an die Neolithierung Vorderasiens – vor als die 1986 von Appadurai und Kopytoff diskutierte *commoditization*. Definitionen und Entwicklungen der Kommodifizierung und die eingeschränkte Reziprozität im frühen dörflichen Leben werden diskutiert und an Beispielen aus dem südjordanischen Ba'ja/Basta erläutert. Die Gemeinschaft von Ba'ja (Late Pre-Pottery Neolithic B, 2nd half of the 8th mil. BC) prosperierte an einem abgeschiedenen Ort in den zerklüfteten Sandsteinbergen der Petra Region. Ihre frühdörfliche Reziprozität – entstehend und gestützt durch Prozesse der Kommodizifierung in Produktionsumgebungen – ist bedingt durch ein Wirkgeflecht aus Landschaftstypen und Siedlungsmustern, Ressourcen, Gütern und Arbeit, der Organisation innerhalb der Siedlung und im Haus, sozialen Identitäten, technologischen und ideologischen Neuerungen und ihrem Verhältnis zu den verbliebenen Elementen der Jäger- und Sammlerkultur im Gebiet. Die Notwendigkeit – und der Einsatz von – Gemeinschaft stiftenden und befriedenden Verhaltenweisen und Strategien in der wirtschaftlichen Organisation der spät-PPNB-zeitlichen *Mega-Sites* Jordaniens wird anhand einer neuen Ware, der Sandsteinringe von Ba'ja, analysiert und illustriert. Diese Steinringe dienten als Tauschmittel, deren Austausch half, eine gemeinsame Identität aufzubauen und zu stärken. Im vorliegenden Artikel wird betont, dass Werte (sensu *commodities*, Definitionen siehe unten) und deren „Konsum" über deren produktiven und biographischen Aspekte hinausgehend als die grundlegenden Promotoren der aufkommenden sesshaften und pastoralen Reziprozität bzw. der Neolithisierung angesehen werden sollten. Er stellt zudem die Frage, ob die frühe Überschussproduktion von Waren nicht nur der Versorgung und der eingeschränkten Reziprozität diente, sondern auch den Weg in frühe Marktsysteme ebnete und für den Wohlstand der Dörfer sorgte, während geeignete Elemente der generalisierten Reziprozität ebenso in die eingeschränkte Reziprozität des frühen Neolithikums überführt wurden. Dieser Artikel unterstreicht zudem die Notwendigkeit, zukünftig ethologische Ansätze in die Neolithikumsforschung einzuführen um sie über ihre bisherigen Grenzen hinauszuführen und Methoden zu entwickeln, die das empirische Fundament und die Interdisziplinarität dieser Forschungen absichern. Das oberste Ziel dieser Forschung wäre es, die wirkmächtigen Entwicklungen der Kommodifizierung, der Territorialisierung und der Reziprozität zu erkennen, die es ermöglichten, das sesshafte Leben des *Homo neolithicus* mit seinen potentiell aggressiveren dinglichen und nichtdinglichen Territorien zu etablieren, befriedet durch neue Mechanismen der Integration, der Gegenseitigkeit und des Ausgleichs; dies alles wurde zur Erbmasse unseres modernen Ethos, die es zu entdecken gälte.

Prologue

The author's decades-long research on the Near Eastern Neolithic has resulted in the realization that the formation of Neolithic life and social identities was governed by a variety of commodification regimes which were conditioned by the specific blend of productive elements and complexity which specific regions allowed. Neolithic commodification means dependence on/ inflexibility through specialization in early productive milieus, which are characterized by exclusive behaviour and acceleration/agglomeration features supporting and triggering each other. Neolithic commodification regimes were subject to the polycentric and polycausal nature of Neolithization in the Near East.

This contribution understands commodification through different presuppositions while studying the origins of commodification in Neolithic times, and thus on a broader basis than the notions of commoditization in other anthropological literature, and stresses a definition much influenced by what is understood to be the Early Neolithic ethos (cf. below) of the Near East. In that respect this contribution represents a new approach and thus might be controversial. Commodification in our understanding is not a mere ascription of abstract value to objects which makes them available to exchange systems, or that represents tangible materials and their meaning moving in and through value systems (e.g. Gosden 2004). Rather, commodification in Neolithic contexts is here understood to be the prolific and multiple productive milieus in which commodities (includes objects, new technologies, product standards and innovative territories, services, exchange standards, ideas, belief systems, etc.) were being constantly created, altered, de- and ex-commodified. Commodities are more than mere goods; they include the entire social milieu of entities, or – in the words of Appadurai (ed.) 1986 et al. – of *things* (cf. below).

Moreover, contact with Neolithic empirical data has allowed us to develop an understanding of commodification beyond any claims of – or even demands for – *the* exclusive and generally valid theory of commodification. Rather, there are many types of commodification, depending on the contexts in which they appear. Foraging commodification is different from productive commodification, and this needs to be considered in the theoretical approaches.

Social identity issues are not directly addressed in this contribution because it is our understanding that commodification acts are themselves expressions of social identity.[2]

For reasons of brevity, a number of important aspects of commodification in productive milieus could not be dealt with in this contribution, especially those related to biophysical (e.g. Clare, Weninger 2010), social and ideological vulnerability, as well as those related to cultural memory. Commodification research is cultural memory and vulnerability research, and *vice versa*. The development and demise of commodification frameworks are subject to the vulnerability of structures, and cultural memory of things is subject to its negotiation throughout times. A good example for the former is the disappearance of craft specialization during the implosion/change of socio-economic systems (e.g. Quintero 2010), or the persisting elements of a forager ethos in the sedentary PPN.

[2] The restricted framework of this article did not allow for further elaboration on theory, and its subject would deserve a monograph. However, a certain amount of theoretical background had to be presented in this initial work on Neolithic commodification; but the article had to be limited in length and this created an imbalance between the theoretical parts and the empirical section. It was agreed with the proceeding's editor that, to limit the length of the empirical section, to focus on the stone ring as an example of commodification, and only briefly address the other fields of commodification attested in Ba'ja/Basta. All this appeared acceptable to the author for the sake of introducing to the Near Eastern Neolithic research this novel concept of commodification and related topics, and for re-vitalizing reciprocity discussions in this context.
This contribution regards commodification from the forager times' perspective, from the difference between taking and making, and not from a today's perception of commodification and productive systems.

The general aim of the explanatory framework *commodification* presented here for the Neolithic is to generate research questions for a new holistic approach to Near Eastern Neolithization and to guide interpretation of future findings in excavations (e.g. Ba'ja), as well as to prepare a substratum for the novel theses and model to be constantly improved and promoted.

Before we turn to the main topic of this contribution and related definitions, commodification in productive milieus, we have to discuss issues of its relation to the conference's topic, the *principle of sharing*. Therefore, the weird instance occurs that terms are used before they are introduced in the article; it may help to work meanwhile with Frame 2, cf. below.

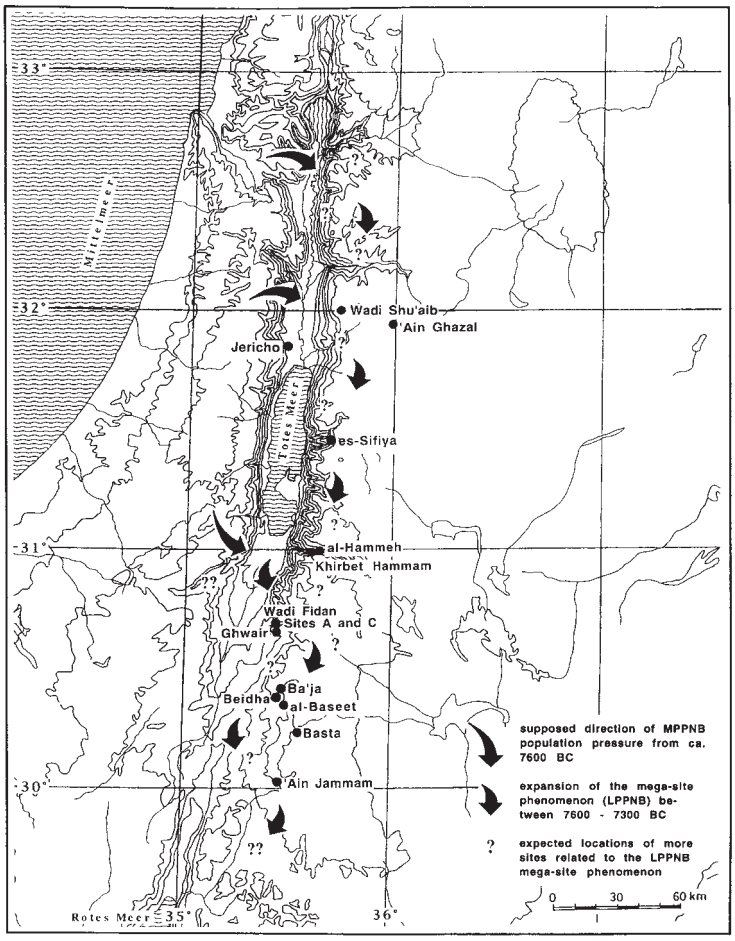

Fig. 1: Mega-Sites and the migration of the Mega-Site Phenomenon, a transient corporate socio-economic life mode with prolific commodification regimes in the Jordanian Highland's 2nd half of the 8th millennium BC (Late Pre-Pottery Neolithic B, Late PPNB) (graph: Gebel).

The Principle-of-Sharing approach

This conference (Alterauge, Butsch 2008) addressed one of the most pressing research issues of the Early Near Eastern Neolithic, the solution of which is necessary for the understanding of the nature of Neolithic life, the Neolithic mind, and Neolithization. For years, Near Eastern Neolithic research has been trapped in a number of ever-changing concepts and approaches that focus on rather restricted explanatory frameworks or "prime movers". Meanwhile new excavation results make researchers wonder exactly how "advanced" and diversified Neolithic life and mind must actually have been. Just as research for decades ignored the ritual and symbolic competencies of Neolithic man, it now ignores the new human ethical[3] dispositions created by sedentary life. Marion Benz's

[3] The terms *ethology*, *ethos*, *ethic* and *ethical* in this contribution always refer to their human expression, context, etc.; the uses of the terms relate to meanings they developed in the human behavioural sciences, including human ethology. Neolithic ethos is defined as the "sum of" environmental, social, economic,

Principle-of-Sharing concept or suggestion, though – or perhaps because – it is borrowed from ethnologic research, has the potential of bringing essentially new questions for the future human ethology orientation needed in Near Eastern Neolithic research. But the Principle-of-Sharing approach will not work if we do not consider the core of the issue, which is Neolithic commodification (for the definition of which see Frame 2) with all its ethical and territorial ramifications, and if, when discussing the Neolithic or Neolithic commodification, we continue to be too committed to the foraging/food-producing dichotomy.[4] Change in reciprocity, from generalized to confined reciprocity (for definition cf. Frame 1), is key for understanding the transition from foraging to farming. But it should be emphasized that reciprocity is just one aspect of the new productive and prolific commodification types that occurred with the Neolithic.

While the Principle-of-Sharing approach must be considered an essential part of an ethological – and etho-ecological – (in terms of human ethology) understanding of Neolithization, the ethological approach to Neolithization must be seen as the holistic bond necessary for integrating all hitherto isolated interpretation frameworks of the Neolithic. The dissatisfaction and confusion in Neolithic research (cf. e.g. the *Supra-Regional Concepts in Near Eastern Neolithization* I-II, 2003-2004, but see also issues addressed in Benz 2000) has much to do with the present neglect of Neolithic ethos[5] as a research concept, and is caused by the fact that our interpretation frameworks cannot cope with the polycentric trajectories of the Near Eastern Neolithic (Gebel 2002c), suffer from the influence of a Epipalaeolithic/Neolithic dichotomy, and thus missing its supra-regional, polycausal, and polygenetic complexities.

On her pre-conference webpage, Marion Benz presented a number of key questions related to the conference theme (repeated here for the sake of documentation; cf. also the Editor's Note, this volume).[6] And in her letter of invitation, she recalls the central thesis of her SIGN project, of which the conference was regarded as part of the research harvest: "It is the goal of the project to test the thesis that during the transition from foraging to food-producing and before the establishment of plant husbandry and herding, generalized reciprocity, the principle of sharing with all, and the open access to resources and land, had to be restricted to circumscribed groups. This change of social values has fundamentally changed our

cognitive, and biological behaviour and dispositions that came up with sedentary and productive life modes.

[4] This view is partly opposed to the conference's concept: "It is the aim of the conference to change the perspectives and to try to adopt the view of hunter-gatherers for a better understanding of the processes that made this transition (to food-producing, H.G.K.G.) possible and to understand the social changes which this transition caused. However, it will only be possible to adopt this perspective if we know the criteria that influenced the decisions hunter-gatherers had to take and the preferences they have. Therefore, the main focus of the conference will be on the generalized reciprocity and on the processes how it was changed. Although, during the last decade, the generalized reciprocity became the subject of anthropological field work and literature (Widlok, Tadesse 2007), theories are missing that explain how and why this social norm was changed and how it could be changed. During the conference we will try to understand these processes and how the generalized reciprocity could be restricted to certain groups as this is a necessary condition for the storing of seeds and for an enduring existence of a herd." (Marion Benz in the pre-conference webpage/ circular).

[5] A convincing effort to reconstruct the Neolithic ethos is presented by Pollock and Bernbeck 2010; it shows that even from restricted excavation areas something about the underlying ethos can be extracted. While their approach to ethos is very different from that of the present author, Pollock and Bernbeck present important insights on reciprocity patterns (food sharing, hospitality), "suppression of materiality and minimization of exchange", etc.

[6] "1) In which parts of a society is it the easiest to disobey generalized reciprocity?

2) Which role did the construction of social identities, of a collective memory and of rituals play during this transition? Who were the driving actors or groups that acted during this transition?

3) For whom was it possible to monopolize the access to knowledge, space or resources and to establish – against an egalitarian ethic – hierarchies?

4) Where and how could we identify hints to such processes in the archaeological data? If so, do they accord with the ethnographical data or do they show different possible ways for the transition from foraging to farming?"

social environment until today, including our attitude to our natural environment, and has lead to ever more exclusive concepts of space, property, and rights in modern societies." All this goes in the right direction, and we are in full agreement that the study of Neolithic dispositions contributes to the understanding of our present-day sedentary ethos and societies. The only thing which is apparently needed for this is a holistic interpretational tool/ explanatory framework – which we believe to be the commodification approach.

Although the thematic frame of the conference had been clearly established, and the conference organisation had explicitly set up an interdisciplinary milieu (at least with respect to prehistory, palaeoethnobiologies, ethnology, ethnoarchaeology), in general the contributions (Alterauge, Butsch 2008) failed to meet the challenge raised by the central questions of the gathering. Apart from problems caused by differing terminology among the disciplines (such as misunderstandings over the meaning of *generalized reciprocity*), it became obvious that Near Eastern Neolithic research is still very far away from getting inside the Neolithic mind of reciprocity (for such discussion cf. also Lewis-Williams, Pearce 2005).

Indeed, any discussion of the Principle-of-Sharing, and of the segregation and construction of social identities at the transition from foraging to farming, must be conducted with great caution because the subject tends to encourage vague and ambiguous research positions, tempts one to excursions beyond the empirical data, and invites ill-founded theses (apart from the general problem of using ethnology in archaeology). We must ask:

1) When we discuss sharing in the Neolithic, do we operate with interdisciplinarily-agreed definitions of terms; and do we use these terms with transparent methods in an explicit way?
2) How do we avoid losing touch with our empirical foundations? And what are the most meaningful object classes and solid data for assuring the empirical foundation of a Principle-of-Sharing approach?

The conference was a start because it underscored the problems. Its harvest are the present proceedings, which show us how necessary and promising an update and refinement of the conference's agenda and central questions actually are, and how urgent it is that we rally traditional Neolithic research from where it currently stands. In our view, the first focus of a follow-up conference should be the establishment of a common terminology by agreed-on methods and a framework adapted to the specifics of the Late Epipalaeolithic/Neolithic of the Near East, and which assures direct contact with the archaeological data "as long as possible" in the research procedure. This latter is best guaranteed by a systemic approach (e.g. Hermansen, Gebel 2004[7]).

[7] In the Basta systemic approach (the Socio-Economic and Cognitive System of Basta), data – objects, findings, interpretations – are channeled through the vertical biographical Levels A-H while they are analyzed for their potential appearance in the various horizontal sub-system Contexts 1-10:

Acquisition Level: A Procurement; *Consumption Level I:* B Production and Refinement; *Consumption Level II:* C Processing, Use, and Re-Use; *Archaeological Record Level I:* D Primary Contexts <Excavation>; *Archaeological Record Level II:* E Secondary and Tertiary Contexts, Extraction/Export <Excavation, Interpretation>); *Archaeological Record Level III:* F Non-Contexts/Missing Archaeological Records; *Archaeological Record Level IV:* G Natural Deposition Contexts/Post-Depositional Disturbances; *Archaeological Record Level V:* H Analysis, Publication, and Post-Excavation Fate of Ruin/Material.

Environmental Subsystems with the Local (1) and Regional (2) Resources and Conditions; the *Exchange Subsystem* with Long-Distance Resources (3); the *Technological Subsystems* with the Household (4), Workshop/Specialized Work (5) and Community Sectors (6); the *Socio-Economic Subsystem* with the Social (7) and Economic/Market (8) Means and Conditions; and the *Cognitive Subsystem* with the Innovation (9), Tradition/Conception/Ritual (10) Sectors.

The Basta Socio-Economic and Cognitive System thus is still a two-dimensional concept; enhancements target a three-dimension system that will include the time axis.

Frame 1: Preliminary general terminology, adapted to the Near Eastern Epipalaeolithic/ Neolithic.

Confined Reciprocity: the Neolithic variant of *balanced/symmetrical reciprocity*: goods, labour, services, intangibles are provided to members of a confined/circumscribed sedentary or mobile pastoral food-producing group (productive peer groups with a confined corporate milieu) to secure participation in its commodification regime with all its goods, services, intangibles, protection, etc. Confined reciprocity develops and exists through productive milieus and their shared values/ commodities, and *vice versa*. *Do ut des* rules are part of the confined Neolithic reciprocity, strengthening the individual group's status in competition with other such groups over access to resources, including intangible resources. Concession orders create a potentially never-ending exchange of things (goods, services, and intangibles) within the peer group, resulting in socially forceful obligations for return/further exchange (non-terminal exchange). Confined reciprocity's purpose is to balance rivalries, level inequalities within the group, and to create social closeness; it concentrates on material and immaterial investment, ideological safety through the commodification of joint values, and protection. Conflicts over/ the collapse of commodification regimes start when shared values are questioned. The collapse of a confined system leads to a new or altered social pattern; violation of a confined reciprocity system leads to severe social consequences. Negative reciprocity is expected not to exist in confined Early Neolithic reciprocity systems whereas elements of generalized reciprocity can have supported confined reciprocity. (Aspects of) confined reciprocity can appear in all confined social systems, including present-day monetised traditional communities (e.g. the Arabian *wasta*, families).

Generalized Reciprocity: the reciprocity of mobile foraging communities sharing a rather open access to resources and things, including intangible ones; goods, labour and services are provided with little obligation for return acts to members of the larger kin group or to members of temporary alliances/interest groups. General rules support a potentially less forceful/binding exchange regime of things aimed at sustaining comparatively open (as opposed to confined) solidarity networks against natural impacts and rival bands. The role of *do ut des* in such communities is somewhat unclear, but elements of confined reciprocity have to be expected: there seems to be some implicit obligation for continuous exchange, but terminal exchange may occur. The creation of social closeness is the major reason for its reciprocal structures. Generalized reciprocity aims at balancing rivalries on general levels, and also concentrates on social investment and security. The total or partial collapse of a generalized reciprocal system does not necessarily lead to new social pattern. Generalized reciprocity appears in all non-confined foraging socioeconomies, and is characteristic for core family relations until today.

Sharing: an exchange type of simple social force, not necessarily meaning reciprocity[8] or for creating strong or obliging alliances. It involves discrete transactions of goods/services, often for a specific purpose. It may be a long-term exchange or restricted to the immediate purpose of the exchange (conditional terminal exchange).

Segmentary societies: societies consisting of equal and congeneric segments or aggregates (bands/clans/ groups) sharing a common culture, economy, belief system (sensu Durkheim 2004 [im Original 1893]). Segmentary societies generally are acephalous and ruled by consensus in decision-making, especially with regard to the distribution of prestige and resources. In the literature they are often also called *segmentary lineage societies* because ethnology has found that frequently such societies are constituted of descent/kin groups. The structure of Late PPNB societies – equal and congeneric sedentary and pastoral households – has many features in common with segmentary societies, but developed "cephalic" political structures (flat-topped to conical chiefdoms: cf. Gebel 2002a). The term is avoided in this contribution for the reasons given above.

Segregation: a very general term used to describe or explain various processes of social, spatial, gender etc. diversification, disintegration, or separation. Because this is a very general definition, it appears inappropriate to attempt to use the term to describe any Late Epipalaeolithic/Neolithic findings. Its meaning can only be defined by its context.

Corporate: a general term for the socioeconomic and ideological milieu in which different individuals and parties share and maintain tangible and intangible properties (material spaces, skills, beliefs, etc.) for securing and maintaining their living mode and its related structures. Shared commodification standards and confined reciprocity acts (e.g. joint ventures, feasts, rituals) support/increase mutual dependence and decrease potential conflicts. Those who leave a reciprocity regime are socially ostracized. Corporate behaviour is confined to one's own group or, when extended outside one's own group, conditioned by its interests. Corporate refers to behaviour, communal to organisation/structure. Corporate activities may not necessarily take place for an immediate, or for any rational tangible or intangible, benefit.

Exchange: used in its general commonsensical meaning for sharing and reciprocal acts.

[8] For this question cf. Widlok this volume and Woodburn 1998 ("Sharing is not a form of exchange.").

Mobile foraging communities with their rather direct consumption have developed supply strategies and firm social structures based to a much lesser degree than sedentary agricultural communities on dependencies. Their generalized reciprocities must have operated on less complex and confined levels, and did not yet involve a larger need for social segregation by diversified packages in subsistence, commodities and cognitive frameworks as in Neolithic times (for definitions cf. Frame 2). During the period of local Near Eastern transitions from foraging to food-producing – a web of Neolithic evolution from the 11th to 6th millennia BC[9] – the generalized reciprocity systems had to adapt to the needs of the new confined sedentary social systems which could not be established and work without new behavioural patterns in territoriality and commodification (Gebel 2007, forthc. 1): the *Homo neolithicus* var. *orientalis* (Gebel forthc. 1) shifted into types of confined reciprocities (cf. definitions in Frame 1) as the new social norms. The mutualistic conditions of generalized reciprocity changed through the establishment of the regional Neolithic packages, and developed new mutualistic qualities, the confined reciprocities needed for these productive frameworks.[10]

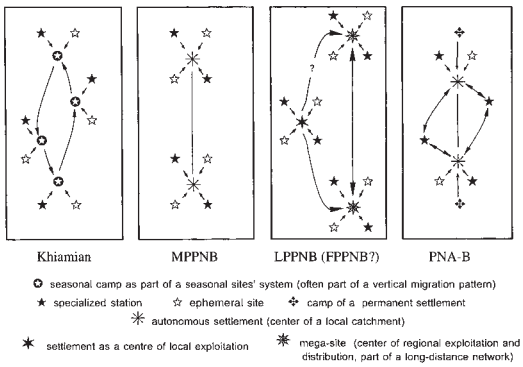

Fig. 2: Reconstructed development of the Neolithic settlement patterns in semi-arid environments of the southern Jordanian Highlands, referring to the smallest settlement cluster (graph: Gebel).

During Neolithization, generalized reciprocities became confined reciprocities. The co-existence of generalized and confined reciprocities has to be expected in areas like the semi-arid margins of the Fertile Crescent which force or allow contrasting socioeconomies (e.g. Gebel 2002a: Tab. 2; Fujii, Abe 2008); here, either Late Epipalaeolithic life modes still co-existed with Neolithic ones, or mixed Late Epipalaeolithic/Neolithic socio-economies had their niches.[11] Reciprocities in Neolithic times implied existential strategies for the joint survival of a sedentary community by mitigative commodification (Gebel 2010) ruled by the concession orders of commodities/ things, balancing conflict regimes and even warfare (cf. the contributions in the special topic issue of Neo-Lithics 1/2010: Clare 2010; Clare, Gebel 2010) upon resident occupations. In the Neolithic, human aggression was prompted by different types of motivation, and conflicts must have reached much larger scales both in terms of quantity (e.g. number of involved belligerents) and quality (e.g. weapon technology, and offensive and defensive strategies); but the human ethos of aggression must not have increased *per se* through sedentarism. On the contrary, sedentarism developed a number of hitherto unknown or unnecessary pacifying devices meant to cope with the enhanced conflict potentials created by the new tangible and intangible territorial densities. Solidarity, integrative processes, interest balance etc. were now helped by all sorts of segregative elements introduced to the emerging corporate structures, e.g. architectural and communicative flexibility of ground plans and vertical spaces through staircases/window-type wall

[9] All dates used in this contribution are calibrated BC. PPNA, M and Late PPNB are cultural period abbreviations and stand for Pre-Pottery Neolithic A, Middle and Late Pre-Pottery Neolithic B.

[10] This relates to Benz (this volume), who expressed it in her conference paper in these words: "According to an ethnoarchaeological model, foragers in transition also had to introduce and accept a more circumscribed mode of sharing in order to avoid the depletion of seed storages and to sustain a herd of animals. It is argued that this change must have started before regular cultivation of annuals could be accepted."

[11] Once again I should stress that our strong Epipalaeolithic/Neolithic dichotomy hinders to identify properly mixed foraging/productive socioeconomic identities existing for possibly even longer periods in the Early Holocene of the Fertile Crescent's marginal zones.

opening/closure of wall openings/crawl spaces (also in the shape of the substructures of Basta, e.g. Fig. 6), labour division, site specialization, possibly differentiated gender roles[12], new social hierarchies, etc., supported by shared moral and belief systems. The basic parameters of this sedentary reciprocity have remained unaltered until today, while the shapes of reciprocities have had to conform to the regional and temporal needs of confinement. Neolithic reciprocity strategies must have started to migrate as paradigms or by actual population movements (e.g. the Mega-Site Phenomenon in the Jordanian Highlands; cf. below, Fig. 1).

When it comes to the question of the reciprocity trajectory, it should be kept in mind that Neolithic commodification processes created an enormous number of new technologies, domestication territories, products, product standards, innovative milieus, ideas, belief systems, etc. What if parts of this early surplus production, benefiting from the time freed from securing immediate subsistence needs, was used for reciprocity on another level, something we later call "markets" and "wealth"?[13] Surplus production must not only be a simple matter of storage, trade, security, etc.; it could have been a "next" general tool for creating and maintaining strategies for co-existence on higher levels of socioeconomic and political organization. We are aware that this view partly spoils existing definitions of reciprocity, but it does suggest a way markets and wealth could have been generated by reciprocity during the Neolithic. Some major obstacles to our prehistoric and archaeological understanding of reciprocity and sharing are:

1) The perception that we are dealing with "objects", "artefacts", "symbols", "subsistence elements" rather than with socialized things which are defined in a cultural system and flow in socially regulated exchange patterns.
2) The modern positivist perception of market reciprocity which denies the possibility that in Neolithic times there was little difference between the physical and non-physical meaning of a thing or commodity (thing or commodity sensu Kopytoff 1986).
3) The missing approach in terms of human ethology to Neolithic commodities and territoriality.
4) The ruling positivistic theories on plant and animal domestication.

If we replace domestication concepts with the commodification concept, both in meaning and methodologically, Neolithic reciprocity could become a key for analyzing all processes establishing things in domestic frameworks, e.g. the commodification of minerals, water, death, appurtenances, as well as goats and barley. Thus it would no longer sound so odd talking about the domestication of water (Gebel 2004b; Garfinkel et al. 2006) or flint (Mortensen 1988). Research may show that the more holistic commodification approach better explains Neolithization than the domestication ones.

[12] Evidence of specialized production or status differentiation *per se* does not imply that these have to be related to differentiated gender roles (cf. also Peterson 2010). In her thorough study – which includes the bioarchaeological perspective –, and in a letter's comment Jane Peterson underlines that there is no evidence for an increasingly restricted role of women during the Pre-Pottery Neolithic, and that such an assumption may reflect our modern mindset and practices more than the empirical evidence that exists from excavations. While this has to be fully supported, we may ask if this was still the case in sedentary communities of the later Neolithic (especially in the hydraulic peasant societies), if their domestic environments not developed more powerful conditions promoting a segregation of gender statuses? Parameters of the Pottery Neolithic imagery and household and farming organization may hint in this direction (cf. also below).

[13] Of course, we observe already in the Pre-Pottery Neolithic clear trends for a separation of subsistence and "industrial" (industry in its prehistoric sense) sectors in the socioeconomies, and possibly individual site economies developed specific "industrial" sectors (surplus production of specific goods for exchange/beyond the own needs) on account of their subsistence parts (production for the own consumption). In all such site economies, the subsistence sectors remained strong enough and do not allow to postulate a subsistence-industry dichotomy; this distinction anyhow would be a present-day and rather capitalistic view representing the tendency to see subsistence as something informal and subordinate to industrial production. The Neolithic commodification approach would help to avoid such a dichotomy.

Early Neolithic commodification, or producing values and value systems

Proemial note, and the difference between taking and making

Before definitions are discussed, some basic remarks should be made to avoid initial misunderstanding: The complexity of our topic, commodification means: giving value to things, things produce values for people, making of value regimes) offers a number of intellectual traps …

In our view, commodities and commodification regimes became the driving agents and the basic norm of Neolithic societies; their introduction and modification mark the difference between taking and making in the human life modes. It does not mean that commodification was not existing in foraging societies: here commodification may have appeared whenever a productive milieu or sector started to produce values.[14] Commodification is related to growth and territorial claims in prolific/productive milieus, as de- and ex-commodification are related to the decline and abandonment in the same; essentially speaking, the social relations in foraging societies are not or less commodity-based. The more productive milieus existed in a group/society – including the cognitive and ideological territories producing values and norms –, the more it becomes "neolithized". In that respect, our commodification approach demands that we dissolve the strict dichotomy between hunter-gatherers and farmer-herders for the early Holocene, and paves the way for a more evolutionistic understanding of Near Eastern Neolithization.[15] Accordingly, it cannot be acceptable to as whether individual factors – for example, sedentism with certain supply strategies (for instance delayed return systems), certain symbolic developments, certain environmental conditions, the productive milieus in general, etc. – played the key role in causing commodification: all these together created the local and regional commodification symphonies of tangible and intangible values/commodities. Nevertheless, it has to be expected that

[14] Foraging commodities and commodification of course exist and are well discussed in the literature (cf. also the footnote on Richter et al. 2011). It is not at all out of the question that quite a number of their aspects overlap with Early Neolithic commodification, and thus may trigger confusion in research. What makes Neolithic commodification distinctive on a very basic level is that it acts from a productive sedentary or pastoral mobile basis, handles supplies, and produces, alters and returns values to an extent far beyond forager levels.

A recent example of forager commodity exchange from the *hadza* presented by Woodburn (1998:53 and 55; alluded to by M. Benz) shows how "similar" commodity exchange in hunter-gatherer contexts can be: "For the *hadza*, it is transferability which gives objects value. In spite of their indispensability, bows, bird arrows and leather bags are regarded as being almost worthless." (Note: These items are the unique personal property of one individual and cannot be shared or exchanged, except after the death of the owner). "The *hadza* do not set aside significant quantities of food or other objects for trade with outsiders ... Commodity trade is negligible and completely peripheral to people's interests. There is no question at all for sharing with fellow *hadza* being eroded by the need for commodities to trade. In this respect the *hadza* are unusual in comparison with some other hunter-gatherers with immediate-return systems who are much involved in commodity trade and whose community obligations to share seem to show signs of erosion by the desire to seek out and to set aside goods for trading."

[15] Based on Azraq Basin Evidence, Richter et al. 2011 stressed in a recent article "that long-term and wide-ranging social networks of exchange and interaction existed within and between regions in the Southern Levant (in the Early Epipalaeolithic, H.G.K.G.), and caution that we ought to be careful in how new or unique we consider interaction in the Neolithic, since it is not restricted to sedentary and larger social groups associated with agricultural communities". This, as a general statement, in our view is more than correct; like the chipped stone industries, marine mollusc industries and exchange often testify sorts of productive commodification even before the Epipalaeolithic throughout interacting regions. But beyond the general validity of this claim, a detailed study of such foraging commodification sectors would be needed in terms of the reciprocity types and productive milieus involved. If they still operated in an overall framework of generalized reciprocity, we just should agree that we have Neolithic elements and trends in Early Epipalaeolithic societies, something which is not surprising for us understanding Near Eastern Neolithization as a commodification trajectory rooted deeply in the foragers' times.

leading factors did exist locally and regionally, possibly gaining and loosing importance through time, although this certainly does not justify the search for the main factor, rather, it obliges to work on regional levels. Commodification is not an achievement of the Near Eastern Pre-Pottery Neolithic, more the Near East's PPN testifies a first climax of commodification and an advent of conditions which promoted commodities and commodification. And: commodification is not dependent upon sedentism, it is dependent upon productive milieus. Thus commodification also characterizes the life modes of mobile pastoralists since they too produce; albeit that their commodification regimes needed to be of different natures than those of sedentary people.

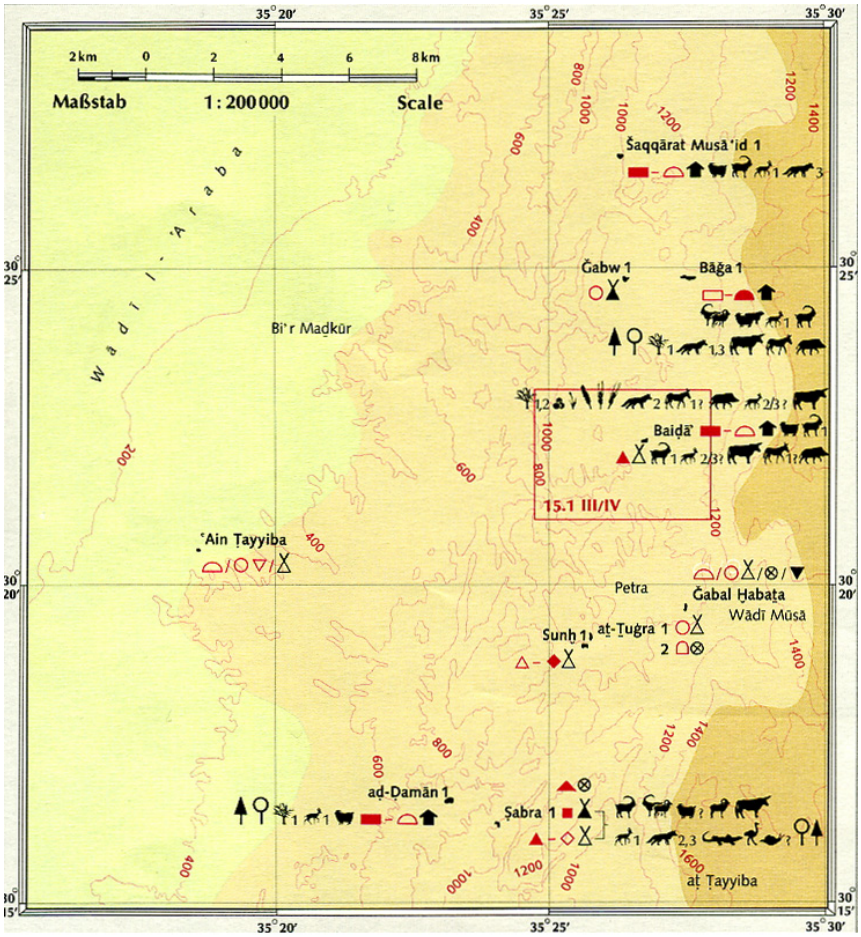

Fig. 3: Neolithic sites of the inner Petra-Area, with subsistence information (from Gebel 1990; for the legend cf. Gebel 1990).

This contribution presents its own sights on various issues. For this reason, it appeared dangerous to apply terms introduced elsewhere but not exactly fitting the meaning promoted here (or using terms that are used differently by various authors or are under debate); this would only have increased confusion. Therefore, I found it more responsible to use my terms and define their meaning in the framework of this approach (Frames 1 and 2). This mainly concerns the commoditization of Appadurai (ed.) 1986 et al., the confined reciprocity "instead" of balanced or symmetrical reciprocity, and coupons in favour of tokens[16]. Although Appadurai et al. provided the starting point and general direction through which this article materialised, I have understood for a while now that Near Eastern Neolithic commodification operated in more and other contexts, thus requiring an understanding of its own. Therefore, and for the sake of brevity, I could not enter a more detailed discussion of points made by Appadurai et al. In addition, there was the reciprocity discussion's framework of the Freiburg conference that had to be

[16] *Tokens* in Near Eastern Neolithic research represent a material value/meaning *per se*; *commodity coupons* in this contribution are understood as agents of social transactions.

served[17] in this article, as well as aspects of research policies when introducing a rather novel holistic approach.

As previously mentioned, the production of values given to things, and things producing values for people, is the major characteristic which distinguishes foraging from producing life. The creation of "values" by foraging life modes occurs through more casual and adaptive frameworks, rather aimed to satisfy immediate needs than to establish stable productive structures. Opposed to that, Neolithic values of things were produced, altered, and accepted to sustain and supply (Bartl 2004) beyond immediate needs. The result was the origin of abstract orders which started to govern societies, clans, and individuals. Appadurai and Kopytoff's term things (cf. below) for the elements of such commodification orders appears highly useful, since it comprises all items and matters of both material and immaterial nature.

If promoted further, *The Social Life of Things*, edited by Appadurai in 1986, could have been groundbreaking for Near Eastern Neolithic research. The insights offered by Appadurai (1986), Kopytoff (1986), Renfrew (1986), and by other contributors to that volume could have guided Neolithization discussion around the traps it later fell into. Commoditization[18] continued to be discussed in other parts of anthropology, but was not adapted for the later prehistory in the Near East. (The possible reasons are mentioned above.) In particular material-minded research appeared immune against the concept: for example, the otherwise seminal book edited by Müller and Bernbeck (1996; Bernbeck, Müller 1996) on prestige, prestige goods, and social structures in the European and Near Eastern Neolithic ignores *The Social Life of Things*.[19] Even our own Basta and Ba'ja Neolithic Projects did not apply the concept[20] during our materials analysis, although the findings themselves suggested the approach. Only recently, when the Ba'ja N.P. came in need of new explanatory frameworks targeting a new field research era at the site did commodification analysis gain importance: while the secluded site had always offered evidence for its Neolithic ethos, after some seven seasons the project was in danger to reproduce traditional excavation results if we would not find a new approach leading further into the "depths" of Neolithic life. A first approach, not yet related to commodification, was presented by Purschwitz and Kinzel 2008. Ba'ja is an excellent case study opportunity to reflect on commodification processes at the onset of Neolithic life.

While materiality discussions dominated research, commoditization/commodification for the Near East's later prehistory remained in an academic shadow. Only Myers edited

[17] This and the need to first explain basic problems of the Near Eastern Neolithic research caused this contribution's structure, too.

[18] The distinction between *commoditization* and *commodification* has been insufficiently discussed. Some scholars apparently see both terms as analogous, while others (e.g. Douglas Rushkoff, http://rushkoff.com/2005/09/04/commodified-vs-commoditized/, accessed in March 2010) see in each a different process (redefined here according to our subject and its needs):

Commoditization: a process/transformation by which unique/segregated things/values having a distinct economic account become common things/values etc. (originally a term of business theory).

Commodification: a process/transformation by which things of no economic value are assigned a value as a commodity (an object, a service, an idea; originally a term of Marxist theory).

The term *commoditization* became widely used in business theory in the early nineties, while Appadurai and Kopytoff discussed and defined the term in their publications (1986) without the connotations possible through this distinction; probably today they would choose the term *commodification* as used in this contribution. I acknowledge the discussion of the issue with Bo Dahl Hermansen.

[19] The prestige-goods-approaches of the 1980s and 1990s selected one sort of tangible commodity for their social and economic information and their role in the formation of social practice – including power – and identity. This selective and material-focused understanding is mirrored by the problems related to the use of the term *prestige good* (cf. also Bernbeck, Müller 1996:5).

[20] However, Bo Dahl Hermansen, beginning in the 1990s, had several times suggested the potential value of the concept to our projects.

book on *The Empire of Things* (published 2001; papers of a 1996 conference) continued in the spirit of the contributions in Appadurai's volume (1986). The volume edited by Demarrais et al. (2005) represents the rethinking of commoditization and an intellectual adaptation into the more attractive while more discursive and liberal materiality concepts.

It is difficult to say how and to what extent the early concept of commoditization influenced the materiality concepts of the present decade. At any rate, an almost endless list of publications (e.g. Miller 2005; Meskell 2005; Archer, Bartoy 2006) discusses in rather unsecured and subjective ways "materiality", and much of the solid archaeological material evidence the commodification/commoditization approach preserves gets lost in the early stage of a materiality study. In a way it appears that materiality research has superseded commoditization research. In a weblog Witmore (2006) states a common frustration over the notion of materiality: "Paradoxically, the fashionable notion of materiality seems to have moved us further way from reality – the material world … Materiality, it seems, has become the sole dominion of human subjectivity." He states that the concern of Tim Ingold and others "echoes Bjørnar Olsen's call for material cultural studies to move on from 'the familiar story of how the subject, the social, the episteme, created the object; the story that everything is language, action, mind, and human bodies' (Olsen 2003:100). Materiality has been over-dramatized to the wrong end …" (cf. also Ingold 2007).

Basic definitions and meanings of commodities, commodification[21] (Frame 2)

"Commodification is nothing new, for us today. But commodification was new for mankind when it developed in Neolithic times." We owe this simple but profound insight to Jürgen Baumgarten, member of the Ba'ja Neolithic Project. From the modern researcher's perspective commodification is something self-evident. However, for the pre-Neolithic and Neolithic ethos commodification must have been crucial and demanding, but also cataclysmic when it could not follow the pace of social needs (cf. below on the Mega-Site Phenomenon, Fig. 1).

New values in all spheres of life and in the otherworldly were constantly being produced, and constantly demanded regeneration on more complex levels in order to avoid the collapse of trajectories: Occasionally there would be relapses into more conservative structures or even the implosion of hypertrophic sedentary systems. Progressive population dynamics through philopatry (in its behavioural sense, *Ortstreue* in German), wealth of time and goods beyond subsistence needs, and competition through diversification gave order to life and generated social identity. These were the essential features of the Near East's Neolithization.

Whenever direct consumption of resources becomes dependent upon accumulated stocks, it becomes necessary to protect these supplies and to structure their allocation. At the beginning these supplies were probably pre-dominantly nutritional, and included the developing idea that the food-producing land around the group's settlement is supply in the shape of property. But the organisation of supplies, and the activities necessitated by the need to accumulate supplies, forced giving value to materials and then further securing these values by supporting them with ideologies. We do not wish to make the mistake of restricting incipient commodification to artificial or natural supplies. Incipient commodification may also result from managing deficits when a formerly profitable

[21] For German speaking colleagues I should explain that the term *Kommodifizierung* has well established specific meanings in the social sciences (going back to Karl Polanyi), in marketing and urbanism research, and in the informational sciences. *Kommodifizierung* can be used in our field if well defined for the prehistoric context. German terms like *Wertschaffungsprozess, Wertschöpfungsprozess* or *Inwertsetzungsprozess* approach the meaning we intend here, but put too much emphasis on tangibles and economics; *Werte- und Wertbildungsprozesse* would come closest to the meaning presented in this contribution.

system no longer provides a surplus. Commodification, or the giving of value to things (cf. the definitions in Frame 2), may, but need not, originate from supply activities. Reciprocity acts may initiate commodification acts; and human needs (sensu Maslow 1943) can trigger commodification. But it could be that supplies created by certain abundances were the main factor in the formation of incipient commodification. Feasts, collective ritual, etc. as occasional but focal social events may have been an important instrument in early commodification (e.g. Göbekli Tepe) since they demonstrate integrative, segregative, and restructuring measures to a large audience.

Commodification promotes security on all levels, as de- and ex-commodification can do. The internal and external security of the individual, his/her group, and his/her *koinon* (sensu Jacques Cauvin) is balanced by commodification regimes. The more sedentary and domestic life becomes, the more important is commodification. The values commodification provides are essential to maintain sedentary loyalties and structures: productive types of commodification are directly related to a sedentary ethos and territoriality, and would hardly work in non-sedentary societies. In terms of research, the commodification tool allows us to focus on the archaeological data while generating the Neolithic research questions with a systemic approach, thus ensuring the empirical foundation of the argument. Provided that the Neolithic features are channelled through a systemic framework, and definitions are made explicit, there is a good chance of avoiding the danger of ambiguity inherent in the concepts of commodity and commodification. Commodification and commodity *per se* are vague or equivocal terms, and they should never be used in archaeology or anthropology without constant review of their meaning and framework.

Before we present the preliminary basic definitions related to commodities and commodification (Frame 2), we offer our definitions of the more general terms in Frame 1: confined reciprocity, corporate, exchange, generalized reciprocity, segmentary societies, segregation, sharing. We stress that the definitions used here were adjusted to the Near Eastern Neolithic and are preliminary. The definitions of commodities and commodification (Frame 2) make use of ideas of Appadurai (1986) and Kopytoff (1986).

Frame 2: Preliminary commodity definitions as adapted for the Near Eastern Neolithic by Gebel, developed partly from the understanding offered by Appadurai 1986 and Kopytoff 1986, and the different understanding of commoditization/commodification by Appadurai/Kopytoff and Gebel.

Commodities/things are:

1) Objects, services, ideas (elements of belief systems, innovations, social standards, etc.).
2) Created by complex social, economic, political, and ideological needs (even the construction of a value may represent a reciprocal act).
3) Materially subject to exchange, consumption, and display.
4) Used for prestige, commemoration, and value.
5) Endowed with social power because of their material value, perceived efficacy in the otherworld, power of creating belief, or their function as a votive object, as a fetish or charm, as a service or gift[22] , or as a symbol of joint ownership.
6) Defined by certain social and ideological settings or arenas which prompt the appearance, alteration, and disappearance of their commodity state. Commodities have biographies (in the sense of the Basta Systemic Approach).
7) Can themselves create commodities or commodification chains. For example, domestic and ritual architecture can simultaneously be a commodity and commoditize space and things.

[22] We exclude here the problematic distinction between commodity and gift (gift sensu Marcel Mauss). Although there is evidence that such a distinction exists (e.g. in the sub-recent Melanesian kula system; cf. below), it is not yet clear that such a distinction existed in Early Neolithic communities. Moreover, I would argue that any Neolithic commodity/gift difference – if we apply this modern conception – could be the result of different value contexts.

Frame 2 continued. Preliminary commodification terminology, adapted for the Near Eastern Neolithic.

A potential/aspect not discussed here is the commodification of people/individuals by the change of their social status/affiliation (e.g. the supposed adoptees brought into Late PPNB extended families by marriage transactions, etc.). Separating people from things is a moral imperative for us, but was not necessarily so for the Neolithic people.

Basic commodity types:

1) Things produced for material exchange ("commodities by destination": e.g. surpluses of blades, food, services).
2) Things produced to represent a meaning in exchange ("commodities by metamorphosis": e.g. stone rings, food, feasts).
3) Things not yet of commodity types 1) and 2), or which had lost their former commodity status ("ex-commodities").

Note: A distinction between the singular/unique and common/mass/homogenous nature of commodities has to be considered in 1) - 3). Commodities need to be analyzed by regarding their flow through the Neolithic system ("commodities in motion"), an imperative of commodification studies.

Commoditization as understood by Appadurai 1986/Kopytoff 1986

- breaks with the Marxian production-minded view of commodities (things) and focuses on the total trajectory (biographies) of commodities from production, to exchange and consumption (the "social life of things");
- the socially relevant feature of a thing is its exchangeability (past, present, future) for some other thing;
- is the production of use value for others, use values become exchange values;
- less important is what commodities are, more important is what sort of exchange commodity exchange represents;
- things move in and out of the commodity state (commodification as process: stressed by Kopytoff);
- four types of commodities exist: commodities by destination, by metamorphosis, by diversion and ex-commodities;
- commoditization lies at the intersection of temporal, cultural and social factors.

Commodification adapted to the Near Eastern Neolithic, as understood by Gebel (this contribution)

Commodification is when

- in productive milieus tangible and intangible things become subjects of common acceptance and value by (re-) production and use, and receive a social value through this;
- a behavioural difference occurs between taking and making things (is the new/Neolithic ethos in terms of territorial, reciprocal, and commodification behaviour using confined sedentary and pastoral milieus in the environmental, technological, social, cognitive and ritual spheres);
- things and their biographies "contribute" stability to prolific material and immaterial regimes/systems, while the same can be done through their de- and ex-commodification;
- it produces the social and individual identity that regulates relations among humans in their productive natural, built and cognitive/ideological environments while at the same it triggers or directs more/other subjects of commodification allowing growth/surplus production, territorial claims, security/confined reciprocity, etc.

The commodification approach is

- an explanatory framework helping a holistic understanding of productive societies;
- leads to understand the individual artefact beyond empiricism and allows to comprehend its social meaning and potential relevance in reciprocity cycles;
- allows to reconstruct its cognitive ingredients;
- cultural memory and vulnerability research, and vise versa.

Neolithic people granted values to things (objects of commodification), and things gave values to people and their social relations. It is assumed that in the Neolithic the meaning or idea of a commodity was less divorced – if at all – from its material/economic value than today.

Near Eastern Neolithic ethos and territoriality

Neolithization cannot be understood without analyzing its ethic, territorial, and commodification background. These fields are interdisciplinary topics, shared with human social biology; behavioural ecology; environmental, evolutionary, and religion psychologies; cognitive neuroscience; and others. Prehistoric research on the Neolithic ethos and territoriality can work with these disciplines once we have laid the data basis for cooperation. At the moment, discussing Neolithic human ethology requires the honesty to acknowledge one's own research predilections. I thus may be allowed to approach Neolithic ethos from a seemingly subjective basis, choosing theses of particular interest to me personally to express my ideas and offer them for testing. The speculation on the Neolithic idea of man that follows is a totally subjective enterprise.

During my three decades of Near Eastern Neolithic research, I have come across many features of a specific Neolithic ethos and mind (cf. also ideas in Lewis-Williams, Pearce 2005) which shares many very basic and common behavioural parameters with us moderns (cf. the Abu Shaher story in Gebel forthc. 1, and the chapter there on Neolithic territoriality). Indeed, the foraging ethos survived in several Near Eastern areas until subrecent times. For example, although in contact with sedentary communities, hunting shell fishers long continued to occupy spots of the littoral Oman Peninsula, Dhofar, and Yemen, practicing Epipalaeolithic lifestyles. A hypothetical forager's atlas of the Near East (Gebel 2002a:Tab. 2; in that respect the recent simulation on the dispersal of the Neolithic over the Arabian Peninsula by Drechsler 2009) would show an astonishing presence of hunter-gatherer-fishermen communities in proto-historic and historic periods, contrary to the cliché image of a sedentary Near East since the Neolithic of the Fertile Crescent.

Fig. 4: Helicopter view of Ba'ja: Vertically incised gorges in the rugged sandstone area north of Petra border the Late PPNB settlement and its dense pueblo-like architecture (photo: Kennedy).

The attempt to summarize these observed features of a Neolithic ethos and mind is irresistible but problematic. It is not clear to me to what extent my own experiences and subjective worldview mix into my understanding of the Near Eastern *Homo neolithicus*. The following theses sound quite valid for the ethos of other historic periods, and even for our modern societies. The explanation might rest in the fact that historic sedentarism and our modern sedentary ethos are rooted in Neolithic foundations. However, a research guided by such human ethological theses does at least prevent one's analysis levels and explanatory frameworks from becoming inflexible or tending to follow self-affirming models. To explain further my research positions, I must add that I understand Neolithic behaviour as directly and indirectly ecologically determined, and I believe their ritual practises and perceptions of the otherworld to have been part of the environmental reality and environment-based belief systems of the *Homo neolithicus*. Accordingly, I expect that the Near East's regional diversity (Abdulsalam 1988) had caused a diversified ritual/religion map sharing only some general perceptions.

In order to illustrate what Neolithic mind and ethos could mean, I present here the five core theses I developed for their understanding: the Conservation Thesis, the Efficiency

Thesis, the Repetition Thesis, the Innovation Thesis, and the Exclusion Thesis (Gebel 2002a, updated here); it is self-evident that all the following elements are interacting dispositions, and thus were not active independently:

1) Conservation Thesis: Neolithic progress and growth were not the result of conscious acts or sought-for innovations, but rather the result of measures to sustain a current life mode; in other words, in tendency they were "defensive". The immediate satisfaction of life needs took priority over any effort toward social, economic/technological, or ideological alteration. [23]
2) Efficiency Thesis: Changes were only tolerated and permitted when all other possibilities for attaining a goal by more easy and inexpensive means had failed.
3) Repetition Thesis: Unsuccessful and disadvantageous behaviour was repeated in modified forms by following generations because sedentary learning remained more restricted to individual expertise than being a transferable/negotiable group-knowledge.
4) Innovation Thesis: Progress and innovation were the result of exploration impulses generated by attitudes during periods of surplus supplies. The surpluses caused growth, which led to more complex social and economic structures, which in turn caused more stressors and further exploration impulses. Stressors from cataclysms also triggered innovations.
5) Exclusion Thesis: Growth resulted in tangible/intangible diversity, which led to more exclusive/segregative behaviour and a decline in generalized reciprocity. The more productive a social unit, the less ready it is to share with outsiders, which tends to increase supplies.

Fig. 5: Sole access to the Late PPNB settlement of Ba'ja through a gorge (the Siq al-Ba'ja), as close as 50 cm at its bottom and 30-70 m high (photo: Gebel).

And: How did the *Homo neolithicus* understand his/her own identity? And how did this understanding differ from that of the forager's idea of man? I believe that during early sedentarism a strong forager self-identity must have continued. The individual defined him-/herself by the group's needs, and a sense of autonomous individuality as we understand it did not exist. Nor does there seem to have been any pronounced gender segregation (cf. e.g. the ideology of the find Fig. 15). But I suspect that there was a hierarchy based on age. The individual existed only as a part of a community, and behavioural, conceptional, or economical non-conformity resulted in expulsion from the group. The heterarchical heritage of the foragers must have persisted into the early sedentary life. Individualisation must have begun with the shift from flat-topped group structures to conical ones, with labour specialization (including ritual and religious specialization), and with the increasing diversity in commodities (Gebel 2002a). In these milieus, which began to be established in the agrarian Late PPNB and were fully developed in the agrarian Pottery Neolithic, I

[23] The question of aggression, conflict and the possible role of warfare in the Neolithic is not considered here. A raised conflict level due to philopatry is assumed for sedentary life, but this does not necessarily mean that the Neolithic ethos was more aggressive. Prolific social, economic and cognitive mitigation mechanisms and structures (mitigative commodification) balanced and regulated conflicts in and between these spheres. For a more detailed discussion cf. Gebel (2010).

suspect the origins of the Neolithic individual, together with a male-female dichotomy and their socially segregated individualities.[24] The increasing restriction of the female and her offspring to a more protected domestic environment probably disrupted the balance of the former gender egalitarianism (see above) in sedentary communities of the later Neolithic: The commodification of the male and female roles is expected to have developed in fully agrarian contexts, though the early sedentary gender egalitarianism remained essentially "Epipalaeolithic" or was probably at least partially restored during periods and economies of higher or seasonal mobility (e.g. the pastoral societies existing parallel to the agrarian in the 6th millennium BC): However, *Homo neolithicus'* idea of man was the subject of Neolithic commodification processes, too.

Fig. 6: Village area of Late PPNB Ba'ja with pueblo-like houses on the site's steep slopes (Area B-North). Basement (with staircases and crawl spaces underneath) and upper floors characterize the architecture having no passages, lanes or the like; rooms are connected by window-type wall openings (photo: Kinzel/Purschwitz).

The transition from foraging to food-production triggered an overall confinement and aggregation of human space. Resident territoriality created philopatrial competition and mentalities that caused groups and group members to define/personalize territorial property and to defend/control it. This resulted in more conflict potential, causing the need for new measures in territorial conflict management. The principles of resident territoriality dominated all spheres of life, including metaphysical territories. Apart from the physical spaces (including natural resources like springs, routes, arable land, water/soil dams, minerals, hunting grounds, etc., as well as building spaces like settlements, houses, rooms, graves, wells, etc.), intangible territories developed, mostly to support the structures of physical territories. Intangible/metaphysic territories helped create, or forced the recognition of, physical territories.

However, the distinction between physical and non-physical Neolithic territory is perhaps inappropriate since we have to assume that at least in the Early Neolithic there was not much perceived distinction between physical and metaphysical space, and Neolithic ideas, beliefs, the meaning of objects, etc. developed functions similar to those of physical territories. Characteristic Early Neolithic intangible/metaphysic territories were expressed by such phenomena as feasts, commemorations, magic (e.g. hiding: Gebel 2002b), ancestral locations, etc., but also included more ethogical and habitational spheres like spaces associated with comfort and safety. In other areas of the globe different types of Neolithization and sedentary processes developed, forcing slightly different concepts of Neolithic territoriality (Gebel 2008a). But it appears that the Near Eastern territoriality paradigm was the most successful, having spread by 5th millennium BC over most of Eurasia. It necessitated adapting to a permanent sharing of spaces and to new categories of territorial values and exchange. It meant sharing life with others to a hitherto unknown extent. It created an almost global sedentary identity. From among the many readings and definitions of human territoriality, we select two or three which appear the most suitable for further defining Neolithic territoriality (Frame 3):

[24] Processes containing such elements can be observed in present-day traditional rural communities in Syria (e.g. Bachich 2007) and Jordan: the introduction of new commodities and tastes began to dissolve/split the agrarian peer group identity and re-defined gender towards more dichotomy. Some of the rare heterarchical elements in the male-female relationship based on the previous labour division also disappeared.

Frame 3: Preliminary definitions of human territoriality (Altman's 1975 definition adapted to the Near Eastern Neolithic).

Bell et al. 1996: Human territoriality can be seen as a set of behavioural patterns and cognitions which an individual or group show in relation to a physical space, resulting from perceived property claims.

Gifford 1997: Human territoriality is the behavioural pattern and attitude of individuals or of a group who intend or practice control of concrete physical spaces, objects, or ideas by habitual occupation, defence, personalisation, and marking.

Altman's (1975) territoriality research identified three different types of present-day physical territories: primary, secondary, and public territories. Translated into the Neolithic sphere, and taken as a preliminary and general basis of Neolithic territorial research, they might be defined as follows:

1) Primary Physical Territories (intra-site and external): permanently, or nearly permanently, occupied; recognized by neighbours as a relatively permanent ownership; closely identified with the group using the space; occupants in full control of use; intrusions by others understood as encroachments.

2) Corporate Physical Territories (intra-site and external): occupation repeated but not continuous; not subject to individual but to corporate ownership; use bound by certain conditions and functions; surveillance of use by representatives of social units.

3) Obtainable Physical Territories (intra-site and external): large number of individuals and groups interested in the use of the territory; rights to it disputed among these individual and groups, with a high potential for conflict; control of territory is subject to mutual agreement and corporate defence; uses of territory restricted/limited; its transfer into permanent ownership requires mutual acceptance or forced acquiescence.

Bell's definition of territoriality is restricted to physical spaces and therefore too close to the hitherto geographic or locational approaches to territoriality we had until recently in Near Eastern Neolithic research, which did not accommodate the actual complexity of Neolithic space. Gifford starts from environmental psychology and complements Altman's anthropological approach. Using their thinking, Neolithic territoriality can be defined as the personal sphere of an individual group (rarely of an individual) that is in the position to define physical borders or set norms in social, economic, or cognitive (innovation, tradition/conception/ritual) frameworks, and which can establish and maintain control of social, environmental, and otherworldly relationships and phenomena. Such permanent territories usually develop and persist only by having borders that are well-defined and well-defended. Although we expect that Pre-Neolithic hunter-gatherer-fisher societies could have developed some aspects of territoriality, such territories tended to be rather casual, "porous", and unstable. What distinguishes Neolithic territoriality from foraging territoriality is simply that Neolithic societies produce and consume in a specific territory whereas foragers use and leave territories. We are aware that prehistoric reality is not quite so simple; but for the sake of clarity we feel allowed to emphasize that general distinction.

Fig. 7: View of the reconstructed mega-site of Late PPNB Basta, reconstructed as a fully occupied site area with two-storey houses and without lanes/open spaces (pueblo-like housing) (reconstruction/graph: Kinzel).

The cause of Neolithic territorial aggression[25] was probably territorial crowding. Territorial aggression must have been common during the Near East's Early Neolithic period, but disappears in certain regions as a major developmental factor during the later Neolithic, when the vast alluvial lands and steppes of Mesopotamia became adapted to new subsistence modes (early hydraulic and pastoral societies; cf. below). Unlike local territorial infringements, territorial crowding has the tendency for supra-communal, supra-local, and supra-regional change, upheavals, and even invasions. Territorial crowding includes such phenomena as over-populated villages, insufficient pasturelands for the increase of flocks, the disruption of social hierarchies through the inflation of prestige commodities, competition in social management solutions, and the like, and results in environmental, social, economic, and ideological stress/conflicts which increase with densities. Density in one sphere easily can provoke a hypertrophic milieu. Several examples of such stress systems are known for the Neolithic in the Near East, one such being the recently debated Mega-Site Phenomenon in the Jordanian mountain ranges (Gebel 2004a, cf. below; Fig. 1). Stress from territorial crowding of course increases with the duration of the crowding and if no outlet or adaptations into new modes of subsistence or ideology are found, the consequence is generally the environmental, socio-economic, and ideological implosion. Examples are the decline of mega-sites during the 8th millennium BC on the Middle Euphrates and in Transjordan; the reason for the development of pastoralism in the Levant's semi-arid fringes, and Greater Mesopotamia's early hydraulic societies in the alluvial plains and their tributary valleys in the 7th millennium BC. In the sense of the Conservation Thesis (cf. above), these major and supra-regional upheavals were briefly preceded by stress-lowering measures, such as the increase of vertical space in villages (second and probably third storeys: Gebel 2006), an increased share of mobile herding in areas outside the daily walking distances, the probable differentiated gender roles of post-PPNB agrarian social environments, etc. The duration and intensity of density damages the social and economic behaviour and values of individuals and groups, and raises the levels of intra- and inter-group aggression. According to the Efficiency Thesis (cf. above), we should assume a decline in innovation and production during the later stage of increasing densities.

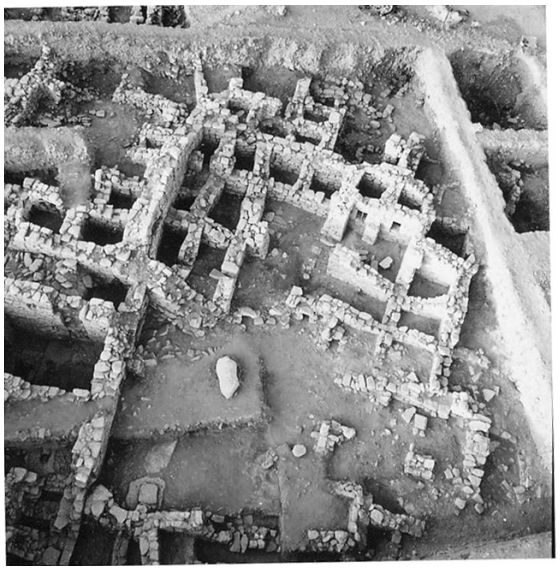

Fig. 8: Bird-eye view of a major building in the Late PPNB mega-site of Basta (Area B): Basement (?) of a multi-roomed house inhabited by an extended family/corporate household; ground plan executed on an artificial building lot created by substructures leveling the slope's inclination; rooms are connected by window-type wall openings (photo: Zu'bi).

South Jordan's Late PPNB commodity spheres, aspects

In the following sections, we explain by some examples from southern Jordan evidence of commodification, de-/ex-commodification and related identities.

Since 1984 research on Late PPNB Ba'ja (Figs. 4-6, 10, 12, 13-14, 16-17, 19-20) and Basta (Figs. 7-9, 11, 15, 21) has developed in several stages, beginning from a 1) material-oriented

[25] *Neo-Lithics* 1/10 contains 15 contributions discussing Levantine Neolithic conflict and warfare, raising questions and issues of Neolithic aggression from a large array of understandings (cf. also Gebel 2010).

Fig. 9: Complex ground plan of the Late PPNB mega-site of Basta (Area A): Structures occupy several building terraces created by substructures on the slopes; building parts of unknown function; no open spaces/lanes found, but a staircase connecting building parts (draft: H.J. Nissen/Zaid/Kinzel/Gebel, plan: Zaid).

analysis via 2) systemic approaches to 3) human ethological research. A major shift of paradigms was caused by the application to the materials analysis of the *Socio-Economic and Cognitive System of Basta* (Hermansen, Gebel 2004; Gebel 2008b), which opened ways of sensing the Neolithic concepts behind the socioeconomic and ritual findings, and forced the need of verifiable approaches to extract their ethological meaning and foundations. The latter enabled a better understanding of the Neolithic mind. Two of these approaches are expected to allow verifiable procedural methods while at the same time providing holistic potential: territoriality (Gebel 2007, forthc. 1) and commodification. In a way, the systemic approach methodologically ensures the data used in the territoriality and commodification approach, while the definition and (still premature) interdisciplinary frameworks of these approaches assure conclusions on the Neolithic ethos. The sites of Ba'ja and Basta also began to become an "oikoumene" in research, benefiting from the constant refinement of research over the past more than 25 years. (Gebel 2001; Gebel et al. 2006).

Fig. 10: Ex-commodified sling balls dumped in the fills of an ex-commodified house in the Late PPNB settlement of Ba'ja (Area B-North) (photo: Purschwitz).

Systemic research on Late PPNB Ba'ja and Basta has long hinted at Neolithic behavioural patterns that are not, or not fully, explicable by the analysis of the individual material. The contexts of the finds and findings, as well as the linked appearance of the finds and findings, in the Ba'ja/Basta systems not only required new levels of interpretation and understanding, they also forced the adaptation of excavation strategies. Thus, the Ba'ja Neolithic Project reached the threshold of a new research phase.

The Late PPNB diversification of commodities and commodity spheres in Ba'ja and Basta

- were a result of the social need to diversify/segregate identities on house/gender, communal, and regional levels, and may include elements or tendencies to "individualize" identity and action by things;
- led to or increased the share of new fashions and related demands;
- led to or increased the sharing of innovative technologies showing hierarchical work organisation;
- led to or increased the sharing of site-related specialized knowledge;
- show clear tendencies toward multi-craft and multi-subsistence site economy (craft and subsistence diversification);
- led to or increased the share of territorial control of abiotic resources;
- separated production and consumption to a hitherto unknown extent;
- joined production knowledge to "market knowledge" (for "commodities by destination");

- presumably caused surplus production that resulted in increased long-distance reciprocity;
- established commodity coupons and early recording systems (notions of values, changing notions of values).[26]

The best and most suitable find classes and evidence sources in Ba'ja and Basta for information on commodification, social identity, and reciprocity are:

- production chains: the stone ring (Figs. 19-21), bidirectional blade production, certain types of ground stone tools?;
- burials/funeral practices/grave goods; from collective and individual primary [trash] burials, intra-mural depositions, secondary burials, tertiary human remains contexts (Figs. 11-14, 16);
- symbolic commodities: stone rings and related "pirate" copies, grave daggers, other grave goods, wall paintings, accessories and hidden objects, the various "ex-commoditized" items, etc. (Figs. 13-21);
- confined territories/spaces: architecture; interior alterations in walls, floors, windows, floor lay-out; communal spaces, etc. (Figs. 5-8);
- seized/claimed territories/spaces: abiotic and biotic resources (Fig. 1);
- materials that did not become commoditized, or were removed from commodification (Fig. 10).

The list demonstrates that we focus our research on the commodification of values and norms on a rather empiric basis.
Before we summarize some aspects of South Jordan's commodification spheres and concentrate on the "one-topic" issue of this contribution – the sandstone rings of Ba'ja – some introduction to several general aspects of the Southern Levant's Neolithization and social change and of the Mega-Site Phenomenon (Fig. 1) is necessary.

Commodification and social change[27]

The Neolithization of the Southern Levant was an asynchronic and polycentric assortment of advances and regressions, mirroring its small neighbouring ecological zones (Gebel 2002a:Tab. 2, 2002c), which influenced each other to a much higher extent than was the case for large neighbouring ecological units like the Mesopotamian flood plains and the Zagros foothills. Though capable of such corporate action as the "tower" of PPNA Jericho, in other contemporary regions of the Southern Levant (e.g. the wadis of the south Jordanian Highlands) they migrated as belated hunter-gatherers between seasonal camps. It cannot even be taken for granted that all regions of the Southern Levant followed the classical four major steps of Near Eastern Neolithic Evolution[28]

[26] This list might be counted as a preliminary summary of this contribution, with respect to the Late PPNB commodification outcome in Ba'ja/Basta and South Jordan.

[27] Late PPNB social research should consult studies on social structures in the southwest American *pueblos* (cf. also Rollefson, this volume), since there seem to be intriguing similarities – and not only in material culture – with these cultures, which flourished some 8300 years later in another part of the globe (Sebastian 2001).

[28] 1) Development of progressively permanent dwellings supported by simple systems of ephemeral and seasonal stations employing foraging economic strategies from the Late Epipalaeolithic.
2) Development of cereal/pulses cultivation while reducing the shares of foraging economic strategies, with permanent settlements being regional temporary motors of development.
3) Development of sheep/goat/cattle/pig domestication while further reducing foraging shares in subsistence, with simple settlement systems oriented to permanent centers.

through substantial and synchronic phases. Indeed it is likely that some potential "motor" regions were hindered from sharing the Near Eastern trajectory by the neighbouring semi-arid "deficit" regions, which acted as a drag on their progress. (cf. also the thoughts on Neolithic polycentrism in Gebel 2002c, 2004c). An example is the Greater Petra Area, in which eight palaeophysiographic units neighbour each other from west to east within only some 40 - 45 km distance (Gebel 1990), and of which only three to four should have been able to sustain Neolithic subsistence modes for any extended period.

In areas like the Greater Petra-Area, socio-economic and related changes are very rigorous: forces and mechanisms of permanent adaptation within spatially restricted and ecologically sensitive habitats – which are subject to intense human impact – rule their development. Their limited and diversified sets of natural conditions allowed the sharing or the rejection of necessary ingredients of Neolithic subsistence modes, and created pressure to return to mobile, even foraging lifestyles. In south Jordan, the loss of the balance between exploitation of limited biotic resources and population growth frequently necessitated innovative human adaptation to avoid a regional regression from Neolithization. This for example happened through the regional emergence of pastoralism (the "palaeo-bedouins") during the Late PPNB/FPPNB around 7000 BC. The compactness of Jordan's narrow southern regions and corridors is not necessarily reflected in the Neolithic archaeological record by any observable eased transfer or exchange of economic, social, and ideological paradigms. The general (Fig. 1) pattern is regional diversity. This is true even of the supra-regional Mega-Site Phenomenon of the second half of the 8th millennium BC because its rather uniform general culture is variegated by numerous regional and local differences.

It has been difficult to reconstruct social changes during the South Levant's Early Neolithic (Gebel 2002a, 2007) since we have neighbouring conditions which demanded different adaptations in terms of heterarchy and hierarchy, household sizes, communal structures, and the like. The overall social development – characterized by the dominant social structures –seems to follow this sequence:

Late Natufian: rather sedentary territorialities of groups/bands (12000 - 10200 BC)

Proto-Neolithic/PPNA: heterogenous (transitional) structures of corporate sedentary (small? large?) households[29] and communities in favoured areas, and segmentary semi-sedentary small households and communities or late foraging communities in marginal areas (10200 - 8800 BC)

EPPNB - MPPNB: corporate small households and communities (8800 - 7600 BC)

Late PPNB: corporate large (extended) households and communities with "outposts" in the semi-arid fringes (7600 - 6900 BC)

FPPNB - PPNC: disintegrative structures of pastoral groups (tribal structures?) in the steppe environments and small to large farming households and communities in the arable areas (6900 - 6500 BC)

PNA - PNB: established dualistic structures of pastoral groups (probably tribal) in the steppe environments and small (to large?) farming households and communities in the arable areas (6500 - 5400? BC; 5400? - 5000? BC)

4) Development of pastoralism (in semiarid areas) and hydraulic cultures (starting by slope irrigation in river valleys and alluvial plains in the foothill zones), allowing permanent settlement structures or mobile herders to exploit the semiarid steppe environments by productive life-modes.

[29] The formation of the Neolithic households – understood in terms of their organizational and ideological/ symbolic features – appears as a socioeconomic reaction to the ending of generalized reciprocity, and *vice versa*. The shift to the resident household could not continue production and sharing on levels of generalized reciprocity, and had to confine the benefits of labour (food, goods, but also shelter, warmth, hygiene, etc.) to the peer group (cf. similar ideas by Winterhalder 1990; Wills 1992).

Fig. 11: Dumped human remains in a larger space of the architecture of Late PPNB Basta (Area A): Trash burials after a cataclysmic event? (photo: M. Nissen/Sperling).

Research on Ba'ja and other sites in recent years has suggested that we should be cautious in our use of the term *family* with respect to the Early Neolithic (*contra* e.g. Gebel 2002a), especially regarding notions influenced by the modern concept of a genetic family (e.g. the core or "nuclear" family).[30] Our empirical data are simply household sizes, with very little physical evidence concerning the exact types of relationships between household members.

Commodification, of course, is subject to social change, and *vice versa*. In most cases it will not be possible to distinguish a commodification feature from a feature of social change. Both were vital elements of Neolithic life, and their similarity could cause serious confusions in Neolithic research. A large number of unsolved questions are related to the web of commodification, reciprocity, and Early Neolithic social change, especially when it comes to the evaluation of heterarchical patterns of "horizontal" power and authority, or, on a higher level of intricacy, heterarchies still operating as constituent levels in hierarchical systems – which appears to be the common condition of Late PPNB commodification in Ba'ja and Basta. There are a number of societal differences between the mega-site components Basta and Ba'ja, the "village that could not expand", as reflected, for example, in their funeral practices, their chipped stone tool industries, their household and special building features, etc. They must have had different frameworks of internal commodification, but we can suppose that there already flourished ruling as well as subordinate commodification frameworks in the area.

A wonderful example of this are the stone rings (Figs. 19-21), now interpreted as commodity coupons (cf. below). The small and secluded settlement of Ba'ja (Fig. 4) produced masses of them in a labour-intensive *chaîne opératoire* from the local sandstone, while nearby Basta copied these rings by using the less labour-intensive oil schist (Affonso, Pernicka 2004) and stained them in red to imitate the labour-intensive sandstone items (cf. below). Was the sandstone ring commodity the object of two competing commodification spheres, resulting in the deflation of an item which had earlier served to give value to social relations? Of course, such a process does not trigger social change: at the most it could have been an ingredient in social change. But it does illustrate the potential relationship between commodification and social change.

[30] The concept of "household" as a socio-economic and cognitive unit rather than a house sensu Kuijt 2000 appears very applicable with the empiric data we have: arguments about fictional (or real) kinship appear doubtful without actual data on genetic relationships. Hodder's original metaphor *domus* and the related understanding of the domestication of societies (Hodder 1990) still provides the best framework for further approaches to the complex interaction of man/plant/animal commodificaton spheres at the beginning of food production.

Commodification and the Mega-Site Phenomenon

The Mega-Site Phenomenon of the Late PPNB (7600 to 7000 BC) expanding into the Ba'ja/Basta areas is a superb example of a powerfully spreading (Fig. 1) social and cultural paradigm, creating extensive territories of social coherence in the Jordanian Highlands, or – in the wording of this contribution – a huge commodification territory. It is presented here to demonstrate how social identities could territorialize in larger areas. The earlier hypothesis that the Jordanian Highlands witnessed an influx of people – or started to accommodate a migrating socio-economic paradigm – arriving from the central Jordan Valley after 7600 BC (Rollefson 1989, 2004) can be re-confirmed (Gebel 2004a:Fig. 1). Population pressure and depletion of resources made people from the sedentary villages west of the central Jordan Valley seek lands in the east. Settlements like Jericho must have been bridgeheads. Here they – or their economy (Gebel 2004a) – infiltrated small MPPNB/Early Late PPNB villages like 'Ain Ghazal and Wadi Shu'eib, which started to prosper mainly on the basis of the migrating ungulates of the vast semi-arid steppe to the east. Households grew from small to corporate size. During the spread of the phenomenon the corporate structures became vital for the survival of the social territories[31] and their commodification regimes, especially when this new socio-economy migrated further south to the less favourable and smaller semi-arid catchments. In a domino effect, the new sites es-Sifiya (Fig. 18), Khirbat Hammam, Ghwair, Basta, Ba'ja, al-Baseet, and 'Ain Jammam were founded (Figs. 1-2), and MPPNB sites like Beidha, Shkarat Msaied, adh-Dhaman (Fig. 3), and Ail 4 (?) were deserted due to the integral power of the new socio-economic paradigm. We may assume that the Late PPNB Mega-Site Phenomenon reached favourable areas almost as far south as 'Aqaba.

Fig. 12: Collective burial below a small room floor in the Late PPNB village of Ba'ja (Area C) (excavation/photo: Gresky/Gebel).

During the half millennium of the flourishing of this phenomenon, few signs of regression occur. The villages display prospering and innovative crafts, steady architectural development, the possible formation of long-distance networks in trade, the beginnings of hierarchical social and settlement patterns (Fig. 2), and stable commodification spheres.

The collapse of the Mega-Site Phenomenon (Fig. 1) apparently occurred in less than one century around 7000 BC. Several factors seem to have contributed to this implosion: 1. a pace of developing social complexity and intra-site population pressure to which the balancing measures of mitigating commodification (Gebel 2010) and territoriality could not react with sufficient speed; 2. the resulting collapse of the social and economic exchange system; 3. environmental impacts (Gebel 2009); and 4. the overstraining of near-site catchments. Since the social territories were disturbed, major parts of the population in the southern Jordanian Highlands began to move into nomadic or semi-nomadic pastoralism.[32]

[31] Large corporate households seem to have been the socio-economic answer to the aggregation and agglomeration characteristic of the Mega-Site Phenomenon.

[32] But see also the arguments on 'Ain Ghazal by Kafafi (2001).

The central settlements of the Jordanian Late PPNB (Bienert et al. 2004) show some variability in terms of their socio-political organisation, and thus in their commodification. This may be due to the fact that the MPPNB social substrata of these areas were developed to different degrees and thus absorbed/received the new socio-economic paradigm in different ways, which again influenced the local characteristics of a mega-site (Fig. 2). While, for example, in 'Ain Ghazal and Wadi Shu'eib the existing MPPNB settlements continued by developing the flat hierarchical chiefdoms coordinating social territories on a mutualistic basis, such flat hierarchical chiefdoms probably had to establish themselves at newly founded locations in the south, where they possibly co-existed for a short time with the indigenous MPPNB social territories and their structures. The abandonment of MPPNB Beidha (Fig. 3) is probably connected with this. At the end of the 8th millennium BC, most mega-sites might have moved towards conical chiefdoms. (Fig. 2; for definitions of terms see Gebel 2002a; but cf. also Rollefson 2004.)

Fig. 13: Flint dagger found in a collective burial in the Late PPNB village of Ba'ja (Area C); length of item: 209 mm (photo: Purschwitz).

Commodification and physical territories

The foragers' lands of the inner Greater Petra Area (Fig. 3), and their biotic and abiotic resources, appear to have been commodified through sedentary life modes arriving from isolated and gradually growing settled areas to the north. Probably this territory was subject to predominantly foraging commodification as late as the later 9th millennium BC. It cannot be ruled out that one day we will find evidence in the Petra Area of a "rather sedentary" PPNA: indeed, this seems to be already attested at Wadi Feinan 16 (Bill Finlayson, on-site information; Finlayson, Mithen 2007), if this crossroad site in addition is not a focal point for groups gathering here from the Arabian Plateau and the Wadi Araba networks. The stratigraphy of the collapsed rock shelter at Sabra 1 (Gebel 1988) may have a similar sequence like Wadi Feinan 16, and its *talus* needs to be revisited after the Wadi Feinan 16 evidence. But so far our limited evidence only indicates seasonal camps until around 8200/8000 BC. But the outer Greater Petra Area (the lands at altitudes below 1500/1600 m to the east of the escarpment which separates the Arabian Plateau from the sandstone area; and to the west the Wadi Araba catchments below 400/300 m) may have a different history of sedentary land commodification. They represent corridors, and together the wadi passages penetrating the rugged Petraean sandstone step, they formed the network through which (paradigms of) sedentary life modes and economies could reach the area quickly. Settled life had definitely been established in these rugged territories by the first half of the 8th millennium BC (the MPPNB; e.g. Shkarat Msaied: Hermansen et al. 2006; Beidha: Byrd 2005; Figs. 2-3), as well as outside the area, e.g. the findings of MPPNB "outposts" with facilities for water storage and diversion some 40 km NNE of Ma'an (Fujii 2007) or 'Ain Abu Nukheilah in Wadi Rum area (Henry et al. 2003). The permanent MPPNB settlements – of which Beidha (Byrd 2005) is the most famous – show that the aggregation and agglomeration of cultivated and pastoral lands had considerably grown on account of the hunting/gathering grounds (Gebel 1990),

Fig. 14: Inventory of a collective burial in the Late PPNB village of Ba'ja (Area D): arrowheads, flint dagger (intentionally broken), beads, mother-of-pearl objects (lower one typical for baby inhumations); grave goods partly stained in red from pouring a red liquid into the grave (burial rite) (photo: Gebel).

if such still existed in the region's first half of the 8th millennium BC. From that time, sedentary land, developed land (e.g. terraced fields, wadi barrages, watering places, etc.), and building areas began to interfere with each other, testifying to a completely changed perception of nature. While the basics of land use had changed and flourished for some time before the new socio-economic frameworks (the Mega-Site Phenomenon), the productivity of the land itself couldn't be much altered, and was of course subject to climatic fluctuations. Productivity was also limited by several other factors: the high proportion of non-arable land and of arable land in areas with unpredictable precipitation; by human impact on soil and vegetation cover from herding, lime burning, fuel collection, monocultures; and by the E-W narrowness of the N-S oriented ecological zones. The aggregation and agglomeration trajectory of sedentarism in the area also must have had impacts on another type of productive land, that of the abiotic (mineral) resources. Even if they were not subject to significant exploitation, at times they must have been sources for conflict, especially if habitats and catchment areas were small and a settlement's industry relied on sources of good stone (e.g. Basta). However, something must have allowed – if not caused – a "realignment of the reciprocity systems" by the end of the MPPNB (Rollefson this volume)[33], giving way to the establishment of the Mega-Site Phenomenon in the area.

The commodification of sedentary territories means imposing rather permanent boundaries when separating primary and corporate physical territories (cf. Frame 3) from land. Such areas may already be occupied by other sorts or the same sort of territoriality. Human territoriality tends to commodify spaces not claimed by others, a behaviour which reaches its limits more quickly under sedentary than under foraging conditions. Social, cultural, and behavioural structures and rules jointly determine the permeability and use of these boundaries. Developing space – including cultivating land and raising structures – represents a direct and "pure" commodification: the act of its commodification is productive, and it is the basis for further productive behaviour

[33] Until around 7600 BC parts of the Greater Petra Area were probably oscillating between foraging and food-production, for which a distinction between cultural and natural land is not easy to ascertain – if such a distinction should be made at all. Concerning this there are a number of philosophical ideas (for example, that only human beings can create cultural landscapes) or "myths" (e.g. that non-resident people do not use up nature: see, for instance, the Southern Levantine's Epipalaeolithic depletion of nature, Watkins n.d.). This problem was indirectly addressed in Cappers, Bottema (2002), Verhoeven (2004) and Watkins (2009).

(e.g. the source of Flint Raw Material Group 1 at Jabal Jiththa, a barrage of Wadi Abu Tulayha, the terrace walls in Basta, or a workshop's space in Ba'ja). Built space is transferred by rights which may be based on mixed elements of inheritance rights (e.g. birth rights, kinship, etc.), transactions (e.g. all sorts of land property exchange), or symbolic/mythological traditions. It may be taken or destroyed by acts of violence, or it can be temporarily or permanently de-/ex-commodified (e.g. doors are blocked, or the site becomes a ruin). Built spaces include: permanently modified landscape occupied or re-occupied and altered by food production; other sorts of land use or productive exploitation (trails and paths, graveyards, hunting stands, pens, field terraces, water wells, channels and reservoirs, mineral exploitation, etc.), and reactions to natural or human-related impacts such as protective terrace walls or channels preventing slope wash; locations of habitation/working spaces (e.g. houses, the settlement itself, caves/ natural shelters used as sedentary bases; butchering or flint mining shelters, etc.); places of commemoration/religious activity/social gathering (e.g. graves, burial grounds, "shrines", assembly rooms – but unaltered ritual natural spots may not count as built space, rather as places of cognition); and community installations (comparable to modern "infrastructure" – e.g. protective walls against floods or enemies, wells, streets and paths, etc.). All these manifestations of commodification and of commodification needs are related to various sorts of individual and collective security and protection, and most of these activities are matters of cooperative behaviour. The essential purpose of built space in the Greater Petra Area is subsistence and domestic shelter; we do not have (yet) evidence for communal ritual space, such as is attested in the Late Epipalaeolithic of Wadi al Hammeh 27 and Mallaha at the beginning of sedentary life (Belfer-Cohen, Bar-Yosef 2000; Boyd 2006; Watkins n.d.). Purely protective and functional built space is known at least from the Upper Palaeolithic (Gebel forthc. 1:Tab. 2).

Fig. 15: Ram's head amulet made of limestone, found in the FPPNB fills of the mega-site of Basta; probably dating to the Final PPNB (earlier first half of the 7th millennium BC); height: 78 mm; combines female ("coffee-bean" eyes for the vulva) and phallic (ram's horns for the testicle, ram's mouth area for the glans) elements; object is presented here "upside down" (photo: Zu'bi).

It is most common to find evidence for the ex-commodification of built space (and materials), and only rarely we discover built milieus attesting the original economic, social and ideological needs and transactions they protected. But the archaeology of ex-commodified space (as well as the archaeology of ex-commodified items, building materials, etc.) is not yet much developed: field research tends to value primary contexts, while *in situ* secondary and tertiary contexts receive restricted attention. But these contexts (especially garbage areas, room and pavement fills, etc.) provide information about things and how they lost their commodity status: the intentional and unintentional abandonment of spaces and discard of items informs us about how value is assayed or lost as well as about the former relationship such items had with the Neolithic individual.

From many examples we select one. In the fills of Room 23, Ba'ja Area B-North, a number of discarded flint artefacts, ornaments, and various tool assemblages were found (Purschwitz,

Kinzel 2008). It belonged to a deserted house used as an intentional dumping area for materials collected from their primary contexts. The association of objects still reflected these, while materials from an upper floor and the roof had infiltrated these fills, too. Most of this dumped material was in good shape and could have been further used or recycled. Among these, in six related loci, were 18 (plus 4?) small balls of flint, sandstone, limestone, and marble (?), all weighing between 30 and 45 g, apparently sling stones (Fig. 10). What do they mean in terms of territoriality and commodification? On the mere archaeological level Room 23 was part of a restricted intentional architectural abandonment process: after the room had been cleared of items of value, the upper floor's ceiling/roof fell into the (storage?) room, mixing with the remnants of the manufacturing of celts and sandstone rings in the workshop that had formerly operated here.

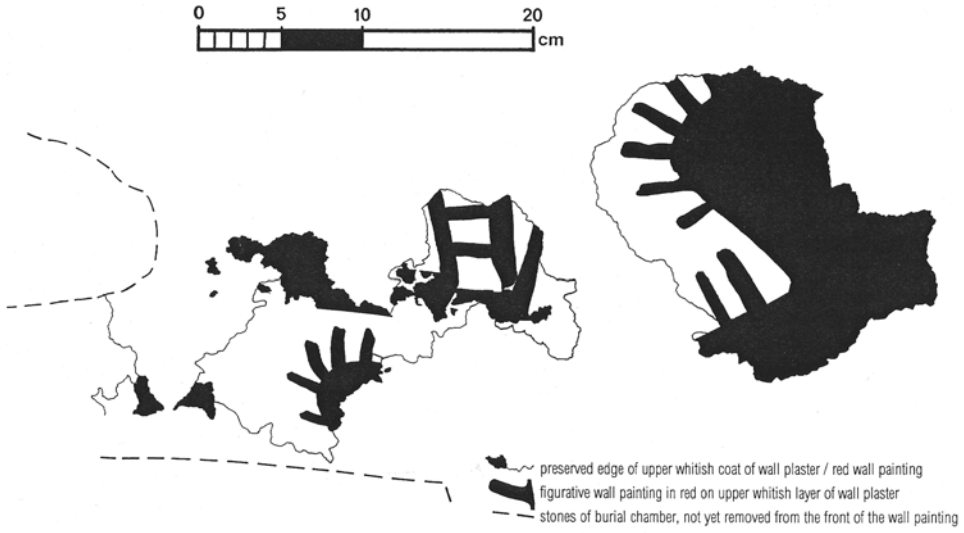

Fig. 16: Wall painting (red mineral pigment) in fresco technique attached to a (hidden) wall of a collective burial chamber set in a house's small basement room of the Late PPNB village of Ba'ja (Area D); specific arrangement on unknown meaning) (drawing: Gebel).

After this sling stones and other material from their original contexts elsewhere in the housing area were intentionally dumped here. We may conclude that the house remains as well as the sling stones and other dumped material were segregated from the living village to serve in or document a sphere of ex-commodified space: built territory was ex-commodified by supporting ex-commodification acts. The items themselves were instruments in this architectural ex-commodification ("dumping loaded with meaning"), rather than being "ready" themselves for ex-commodification.

Rituals or magic practices for intentional ex-commodification were integral to Early Neolithic behavioural patterns in the Near East, and included the breaking of clay figurines, the termination of house or room use by acts of "devaluation" (neglect, dumping, incineration?), or the re-commodification of items by a formal ex-commodificaton (e.g. in Ba'ja the "new" stone bowlets inserted upside down into plastered floors and the flint celts inserted into a wall corner [Fig. 17], cf. Gebel 2002b). The sling stones remain an interesting puzzle: What idea might be behind ex-commodifying sling stones?

Intra-site built space during the Early Neolithic in South Jordan shows a general trend for its layout (the stages are idealized here):

1) Isolated, round structures spread into
2) clusters of round structures, then these clusters are transformed into
3) multi-roomed rectangular houses employing
4) the vertical space as a second storey.

Fig. 17: Hoard of "fresh" celts (one unfinished) set into a wall's corner of the Late PPNB village of Ba'ja, (Area B-North): magic to strengthen walls? (photo: Gebel).

It might be that each region in the Southern Levant underwent this general development, but at a different pace and not necessarily concurrently. All these stages are highly dependent on local socio-economic dynamics; e.g. the vertical space stage (Gebel 2006) could not have taken place unless intra-site population growth caused space allocation problems; and the round structure stage continued around the fringes of the LPPNB Mega-Site Phenomenon (cf. below) with MPPNB social structures using a Late PPNB chipped lithic industry ('Ain Abu Nukhailah; Donald O. Henry, pers. comm. and Henry et al. 2003). Ghwair (Fig. 1) in Wadi Feinan is a perfect Late PPNB mega-site with MPPNB radiocarbon dates (Simmons, Najjar 2006).

This general process in built territoriality exhibits several major elements (cf. also Kinzel in prep.) of space commodification, whose adaptive character and innovative elements originated in and resulted from the social and cognitive experience of built space. The major features of architectural commodification in southern Jordan (several are characteristic of early architectural development throughout the Near East; cf. also Gebel et al. 2006) are:

1) Aggregation/agglomeration of space (e.g. through the introduction of the rectangular room; standardized ground plans and modular room arrangement; densely built house/room clusters on building terraces; the transfer of corporate space and compound activities onto the roofs, thus reducing open spaces/lanes; second storeys; etc.).
2) Functional diversification/hierarchisation of space (e.g. compartmentalisation; room size variability; specialization of rooms; etc.).
3) Practical and cognitive "signals" of space use (e.g. "internalized" entrance situations; wall openings for indoor interaction; the defensive character of complex and confined ground plans; structured neighbourhood interaction by settlement layout/social map of settlement; intra-mural burials as testimony of ownership [cf. also Stordeur, Khawam 2007]; insertion of symbolic items into architecture or the deposition of materials in deserted architecture, e.g. Figs. 10-14, 15-17; etc.).

Commodification and labour/consumption

On the scale of human labour and consumption history – including conspicuous consumption – the Late PPNB of the Near East appears as the first climax of (1) complex "industrial" surplus production, (2) an increased diversity of goods not essential for subsistence ("personal" commodities), and (3) markets (Gebel 2002a, forthc. 1). This modern interpretation, however, is problematic if it ignores Early Neolithic commodification in its own right. Co-operative behaviour and societal balance[34] seem to

[34] As early as 1893 Emile Durkheim posited that the mere division of labour cannot help or create societal balance; instead such balance could be supported by labour division if the society has already developed

have been maintained by all sorts of segregating and mitigating elements, e.g. confined reciprocity systems, labour division and craft specialization, site specialization, possibly differentiated gender roles, "fashion" regimes, chipped stone and other craft identities, "specialization" (exclusiveness) in ritual and religion (Cauvin 2000), etc. The early Near Eastern Neolithic is characterized by multi-craft and multi-subsistence site economies, showing specific regionalisation in crafts, subsistence economies, and was probably accompanied by the establishment of conical clan chiefdoms. The villages show – for different time spans – prospering and innovative crafts, stable architectural developments, regional and long-distance networks in trade, the beginnings of hierarchical social and settlement patterns, etc., all balanced by local/regional commodification regimes. At several points in this history regression occurred, most likely related to the collapse of commodification regimes. Labour and consumption are vulnerable to such declines, which must have been caused by interacting destructive developments/elements in the social, ideological, and environmental territories.

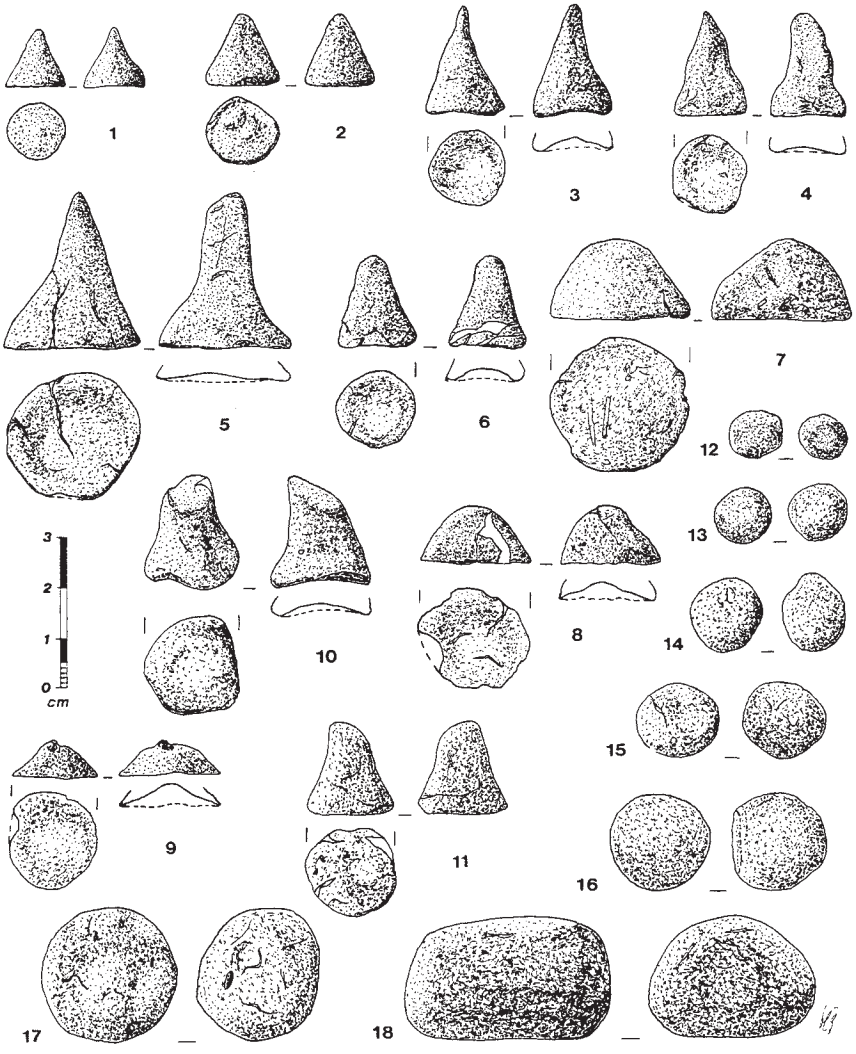

Fig. 18: Hoard of calculi probably representing early recording needs/magic issues in the Late PPNB (from the Late PPNB mega-site of es-Sifiya, Wadi Mujib; Mahasneh and Gebel 1999); calculi were found in Ba'ja and Basta, too (drawing: Gebel).

a just system of integration and morals for the individual (Durkheim 2004 [originally published in 1893]). Translated into our understanding it would mean that corporate-minded cognitive commodification systems would have helped the establishment of labour division and craft specialization.

The increasing production and consumption in Late PPNB southern Jordan[35] resulted in, and was encouraged by, several trends in the various commodification sectors:

In the Late PPNB labour sphere, *ad hoc*/opportunistic and self-sustaining household production was supplemented by the specialized workshop production of some individual households of a settlement. Most of this seems to have been focused on one particular craft, such as the Basta bidirectional blades or the Ba'ja sandstone rings. Thus one may speak of "community specialization" (cf. Barzilai 2009). In the Late PPNB, production became both more diversified and more standardized, with new crafts appearing and old crafts further developed technologically (e.g. lime plaster production, marl vessel production, pigment production, wall painting, etc.). These crafts may have been practised by just one or only a few households in a settlement. The lithic/mineral economies show clear trends of local surplus production of standardized products, mostly near the source areas, accompanied by further diversification and standardization of the tool kits.

The diversification of goods is both the result and the cause of tool kit diversification, meaning that commodifications in the goods sectors trigger commodifications in the labour sectors: commodification and standardization in the Late PPNB goods sectors are sometimes synonymous. This process stops when goods commodification declines because it becomes "inappropriate" for, or unnecessary to, new lifestyles.[36] For example, the decline in ornament variety attested in post-Late PPNB pastoral or farming communities apparently caused a technological and tool kit "devolution" in the chipped lithic industries and the restriction of craft specialization to certain products (and production places?).

Basic features of Late PPNB commodification are:

1) Late PPNB craft specialization[37] is mainly related to stone/mineral working (chipped and ground stone industries; building material industries including mining, lime burning, etc.; stone bead manufacture; marl vessel production; etc.).[38]
2) The technological and innovative substrata for the shift from informal to formal technologies (commodification of formal technologies) include permanent training, innovative approaches, and skill/knowledge transferred through generations of craft specialists. Also necessary is the permanent societal framework generating and supporting the related economic and consumption needs and stabilizing the specific lithic economies and their special lithic behaviour, including its relation to the lithic landscape. (For issues of the "lithic ethos" cf. Gebel 2004d).
3) There is much evidence for dual production modes in Late PPNB technological systems. These characteristic craft dichotomies occur whenever specialized

[35] The following section draws on Gebel 2007. Some of the following (generalized) insights are supported by a recent study of the social complexity in the Southern Levantine PPNB as reflected through the bidirectional blades industries (Barzilai 2009).

[36] Mobile pastoral economies require a high competence in informal technologies and in improvisation, whereas the technological success of sedentary communities depends much on predictable technological strategies.

[37] The Late PPNB craft specialization types are far from fully understood. While specific evidence (e.g. Quintero, Wilke 1995; Gebel 1996; Quintero 2010) has been considered to some extent, a theoretical framework for the social feature *craft specialization* that takes into account all industries linked to each other in an Late PPNB system is still not developed. In a recent approach, Barzilai (2009) tried to outline such a framework (based on a work of Costin 1991) that takes into account parameters of context, concentration, scale, and intensity for the bidirectional blades craft specialization, and identifies three specialization types for the PPNB. The results suggest extending studies through these parameter classes to other industries, but it must be checked if the specialization types shouldn't be reworked for the diversified evidence we have from the Late PPNB industries.

[38] One would hesitate to link "earthen" technologies (clay figurines, mud plaster, bricks/pisé, etc.) to "hard rock" technologies; but with respect to raw material exploitation and craft specialization they seem to have developed and flourished under similar behavioural patterns.

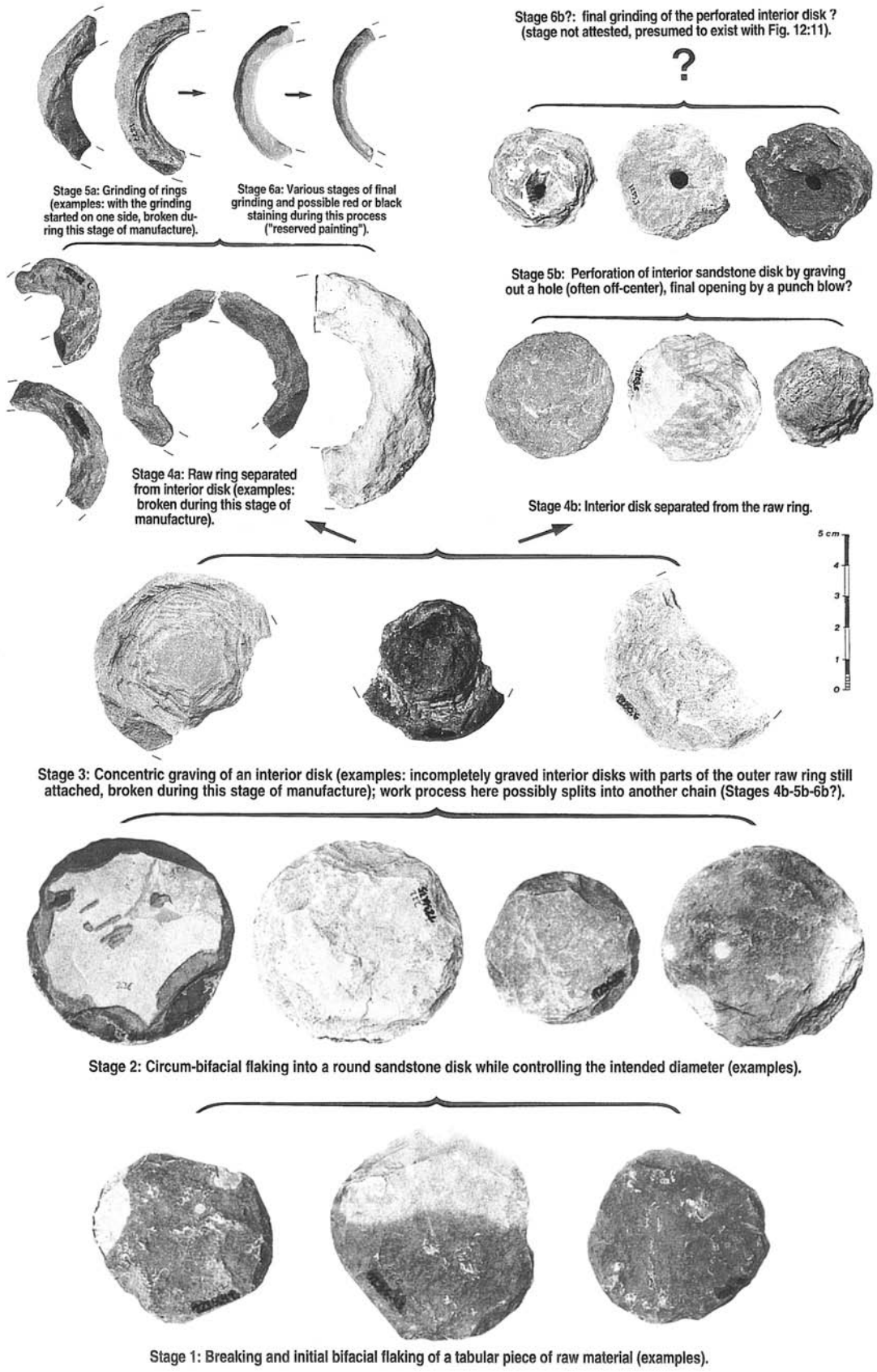

Fig. 19: Chaîne opératoire of the sandstone ring production at the Late PPNB village of Ba'ja (from Gebel et al. 1997).

production is imitated or supplemented by household level production. Specialized production – in effect "professional" work – thus enhanced the lithic economic status of unspecialized household and opportunistic production for home needs. Unspecialized household production may even have been a vital preliminary for craft specialization.

4) The product standardization in some Late PPNB products not only helped to standardize other products (e.g. blanks and thus the final products), it also standardized work processes and their operational steps, which now were becoming characterized by skill segregation.
5) Innovative and social frameworks developed each other to a hitherto unknown extent during the Late PPNB.
6) During the Late PPNB the expanding range and diversification of economic activities, and the demands created by fast growing communities and populations, pushed especially lithic production beyond local domestic needs. The previous MPPNB community sizes – probably only 20 % that of a mega-site community – neither would have had the innovative capacity nor the innovative pressure to develop craft specialization and surplus production (cf. also the development in the settlement pattern, Fig. 2).
7) Operational chains *(chaînes opératoires;* Gebel 1996) characterized by error-control, self-innovative technological behaviour, and skill diversification/segregation may not have caused social hierarchisation to the extent assumed earlier (Gebel 2002a): such labour value issues may not be of serious social relevance in rather heterarchical societies.

In the Late PPNB goods spheres there seem to have been clear tendencies for:

1) standardization of goods;
2) an increased production of standard goods in type and beyond the quantity they were consumed for personal needs;
3) markets[39] that demanded certain goods from particular production centers or sites/ areas;
4) goods produced not for use or for markets, but for prestige, commemorative purposes, rituals ("commodities by metamorphosis"; e.g. the unique daggers in the collective burials of Ba'ja: Figs. 13-14, or the evidence of intentional breakage of figurines);
5) goods that become re-commodified (all re-cycled items, all demonstratively ex-commodified items).
6) It is expected that in the Late PPNB community lack of access to goods led to more social isolation and that the social power that goods could provide was generally higher than in previous PPN periods. Goods may have played a more important role in the household and community hierarchies than earlier.

[39] Different types of market networks must have existed in the Late PPNB. While the bidirectional blade trade suggests local, intraregional, and (neighbouring) interregional exchange, the trade of malachite, basalt, pumice, green marble, bitumen, and shells from the Red and Mediterranean seas could have used supra-regional networks. The "trade" of knowledge by migrating craftsmen in that period has to be taken into consideration. The "arrival" of obsidian from Anatolia (and the Arabian Peninsula?) must be the result of occasional connections of a yet-unknown nature, but it would be premature to speak of any long-distance interregional trade.

Commodification in cognitive territories

As has been said, it is not only physical territories and tangible materials that are subject to commodification: just as physical territories were shaped to provide shelter and identity, so too cognitive/ideological territories were created to provide spiritual protection and identity. According to Gifford (1997, 2002; cf. Frame 2), all ideological frameworks – including meaning bearing innovative milieus and objects – are territories. As human beings mark, personalize and defend physical territories and objects, they mark, personalize and defend ideas, beliefs, traditions, etc. (in our understanding all these are prolific commodities if operated in sedentary environments). Both tangible items and intangible ideas provide social identity in similar ways and create territories.

All social rules and structures, innovation and market frameworks, ritual and magic practices (e.g. Figs. 15, 17), symbols, belief systems (Cauvin 2000), and other spheres of cognition are the result of commodification. Because these are intangibles, their commodification (with the exception of social structures, innovation, and a few magic practices) is the least known area of Early Neolithic commodification in South Jordan, especially with respect to belief systems. It appears that this culture lacks architectural evidence for ritual, but it might be a matter of time to identify such.

The reconstruction of the Late PPNB social fabric (cf. above) attests a regime of commodification focusing on corporate structures and social identity. This is expressed by the uniformity in the material culture (especially the architecture, Figs. 7-8), by the stone rings (Figs. 19-21), by the workshop organisation, etc. Commodification by innovation is mainly attested by the buildings, bidirectional blade and ground stone tool production/use, and some ornament industry frameworks. Commodification in market frameworks only seems to be attested for the stone rings, bidirectional blades, and possibly some ground stone tool types.

Commodification in ritual and magic practices is attested in the funeral practices and grave goods, and in the evidences of hiding/reinforcement magic. The dead of a household were most likely commodified by being 'stored' under the floors of the house as guarantors and witnesses of the household's right to occupy it (Fig. 12). Grave goods appear as personal property (e.g. Figs. 13-14) by being buried with the individual. The commodification of red pigment, poured over the dead and the grave goods as a red liquid, is attested as a practice; special respect is paid to skulls by placing them in protected locations if burials were disturbed; grave goods are ex-commodified by being dumped when a burial is removed or disturbed; etc.

The Late PPNB of South Jordan is rather poor in symbolic inventory and gives little insight into the perception of a world/otherworld "dichotomy". The evidence of imagery is limited (e.g. wall paintings in Basta, Ba'ja, and Ghwair; the small heads and figurines of Basta) but indicates a well-developed symbolic world. However, thus far this world is closed to us. In connection with one of our topics, confined reciprocity, the *do ut des* event is most intriguing (the "reimbursement" of ancestors by 4 figurines as compensation for removed wall stones, cf. Hermansen 1997; Fig. 15).[40]

[40] Trevor Watkins stressed in several recent contributions that South-West Asia's "external symbolic storage networks are extraordinarily powerful" (e.g. Watkins n.d.), and that they – being partly non-verbal – originate in the Neolithic. He understands that the "core of the Neolithic revolution lies in the emergence of symbolic culture, particularly external symbolic storage, which allowed the formation and sustaining of large, permanently co-resident communities." (Watkins, *ibidem*). And further: "As these communities developed practical farming to sustain their own growing populations, they opened the way for the export of the whole package – the culturally rich environments of large permanent communities supported by a highly productive economic system." Future research applying the commodification and territoriality approaches to all cognitive – not only the symbolic – and material spheres will not only underline this understanding, it probably will evaluate how symbolic storage networks had to "cooperate", were altered, existed and declined through the general web of networks formed by all sorts of changing commodification in the socio-economic and environmental spheres.

The belief systems of the southern Jordanian Neolithic people are unknown, and must become subject to commodification research employing disciplines such as religious psychology and cognitive neuroscience. Future ethological studies must encourage investigations based on the evidence we have for territorial behaviour in confined spaces (domestic architecture, Figs. 6-9), communal spaces, catchment areas with abiotic and biotic resources, unused space) and the role of space and materials that did not become subject to commodification.

Commodification and coupons

As has already been discussed in the section *Commodification and Social Change*, the stone rings of Ba'ja and Basta are a striking commodity in the inventory of those sites. They are not just a south Jordanian feature, but are also well attested in the late aceramic and the early ceramic Neolithic of the entire Near East (Starck 1988).[41] When we began finding them during the 1984 season in Ba'ja and Basta, we interpreted them as bangles, although we were always in doubt about this interpretation because they are fragile and even if used only occasionally would not survive for long. The other problem is their size: only a fraction of them had diameters greater than that of the typical adult hand, and the very brittle oil schist variety especially would have fractured if pushed over a hand with any force (Gebel forthc. 2). However, when we found the sandstone ring workshops and waste dumps in Ba'ja which showed an elaborated *chaîne opératoire* (Gebel et al. 1997; Fig. 19), identified their oil schist copies in Basta, and recovered large numbers of fragments of these rings at both sites, we realized that they must have been a significant feature of both sites' prestige goods. The suggestions that they were sewn onto clothes, or were body ornaments strung on cords, were obviously dissatisfying for such non-practical and fragile items. Since they were so fragile, we never considered the possibility that they might be part of one of the very common Early Neolithic breakage rituals (e.g. Mahasneh, Gebel 1999). Our recent reciprocity and commodification discussions, along with records from ethnology (cf. below), has suggested that they might have been *commodity coupons* without material value used for social exchange/ties, whether facilitating general or for specific types of exchanges (rather than being objects of a certain material value/meaning *per se*): to balance 'payments', to grant or receive a favour, or to establish, maintain, and pacify relationships. Perhaps the work invested in them represented or stood for the prestige they provided to the person giving them and the person receiving or storing them. Perhaps their intentional breakage symbolized the termination of the relations and dependencies they signified, and unintended breakage had also its meaning. Perhaps the different material used, and the different amount of work invested, in them did indeed express different values. Perhaps they were reciprocity items of the intangible social sphere.

Fig. 20: Sandstone ring production at the Late PPNB village of Ba'ja: Failed separation of the raw ring from the interior disk during carving out the raw ring from a sandstone disk (Fig. 25, Stage 3) (photo: Gebel).

[41] They are also known from the European Neolithic, e.g. Docquier, Bit (1989); Giazzon et al. (2002); Burnez-Lanotteet al. (2005) (references provided by Jürgen Weiner, Köln).

The stone rings were never found as grave goods, although sometimes a fragment turned up in the fill of a burial. They are more or less equally distributed among cultural layers and room fills, without any indication of a special primary context in which they could have been used (Gebel forthc. 2). The primary context of their production in Ba'ja was small basement rooms. This might indicate that they were "common context" items.

If the stone rings of Ba'ja and Basta (Figs. 19-21) were commodity coupons,

1) their "material" value was represented only by the work invested in them,
2) their immaterial value was provided by their common-sense recognition as bearers of a value and meaning for reciprocal relations,
3) their individual social power in a specific reciprocity act was generated and controlled by the related ruling reciprocity regime and its standards, and
4) their main function was to provide an instrument of agreed value for reciprocal acts.

But the specific character of their main function remains enigmatic: we can think of merely intangible functions like granting/receiving favours/grace; or establishing, maintaining, and pacifying relations; or facilitating manipulation/manipulative skills. More tangible functions for them can be imagined: balancing interests/payments; reducing competition in commodity exchange; countering social disturbance; or combinations of all or some of these.

But if such commodity coupons existed or were needed in the Late PPNB, why did not all Late PPNB sites use stone rings or objects of similar functions? This question, raised recently by Maysoon Nahar (pers. comm.) referring to the absence of stone rings in Tell Abu Suwwan near Jerash, cannot be answered at the moment. It is a matter of fact that not all Late PPNB settlements have stone rings, and those having them do not use them in the amounts found in Ba'ja/ Basta.[42]

Commodity coupons are known from various other cultures. Two recently living examples that illustrate what the stone rings of Ba'ja and Basta might represent are the *raffia* made by the *lele* in the Kasai Area of former South-West Congo, and the *kula* of the Milne Bay Islands/Massim Archipelago in Papua New Guinea.

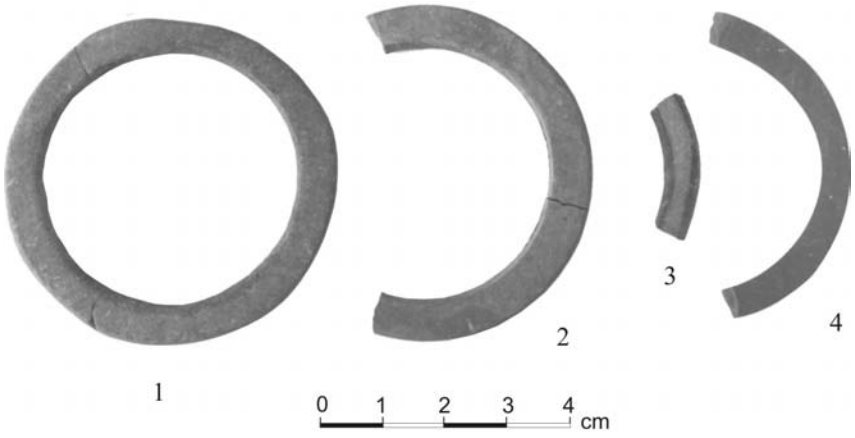

Fig. 21: Rings made of oil schist from the Late PPNB mega-site of Basta (photo: Sperling/Pokrandt).

[42] In Basta, stone rings were found in a polychrome form, with a partly removed black stain to expose the greenish-cream of the oil shist they are made from. Very little sandstone ring production waste is attested in Basta (Gebel forthc. 2). It could well be that the completely different sandstone ring technique – as compared with the oil schist technique – was used in Basta by only a few workshops importing the sandstone as raw material from the Petra Area and which were familiar with the Ba'ja techniques, producing an item in competition with, and on another prestige level from, the stained local oil schist rings that were "cheaper" in labour costs. The two different types of stone rings in Basta (no oil schist rings were found in Ba'ja) and their possible different social meaning may once help to understand the function of the rings better.

1. The *raffia* cloths are woven by all *lele* men mainly to serve as bridal price items, but they are also given to fathers upon adulthood, to wives upon each child delivery, or to a wife's parents as mortuary gifts (20 *raffia* each). But they are also used as coupons for solving problems, offering congratulations, paying ritual officiants, paying fines, etc. Thus *raffia* are a kind of payment for services, the acquisition of a certain status, or the restoration of a lost status. Douglas observed an imbalance in the *raffia* indebtedness between young and old men: Young men are in constant need of *raffia*, which they can obtain as rewards for services, or for loyalty and respect toward the old, who accumulate them by having more time to weave and exchange. The *raffia* values are fixed (Douglas 1958:Tab. 3), e.g. 60 raffia for a female goat with kid. Although used as a currency in the *lele* communities of the 1950s, *raffia* had no specified value in Congo Francs and were never exchanged for actual cash. (Douglas 1958, 1967).

2. The *kula* ring exchange is a ceremonial system with standardized objects of purely symbolic value. Islanders canoe for hundreds of kilometers to present necklaces of red-shell discs (*veigun* or *soulava*) to northern neighbours and bracelets of white shell (*mwali*) to southern neighbours. There is some regional variability in the exchange: on the Trobriand Islands it is controlled by chiefs, and on the Dobu all participate in it.
The purposes of the exchange are to maintain good ties with neighbours and to sustain or enhance the prestige and social status of both recipients and givers. All this makes use of well-established traditions, and of firm and respected ceremonies among the exchange partners. The exchange imposes strong and durable obligations, resulting, and expressed, in bonds of mutual care. The *kula* necklaces and bracelets provide temporary prestige/status before the exchange partners are obliged to present the item(s) further in the exchange ring. The more exchange partners one has, the more prestige and status is gained together with the accompanying alliances and obligations.
A special case are the *muyuw* men who have *kula* as personal property, including the right to destroy them. Here the transfer of *kula* items into personal ownership (*kitoum*) may occur during the exchange process. But this does not actually conflict with the overall purpose and function of a *kula* as an item to be returned – even as a substitute – to the original owner. The *kula* items gain various ranks during the exchange process, and when entering the exchange system begin at a lower prestige level: e.g., those who receive *kula* are in a lower position by age and worthiness according to *kula* value relationships. Esteemed individual *kula* create competition which is performed by various measures and rules aimed at obtaining the desired object. (Damon 1980; Malinowski 1920, 1922; cf. also Appadurai 1986).

Epilogue

We do agree: Neolithic commodification is difficult to explain because of the confusing complexity by which it is linked to all spheres of Neolithic life. At the same time, our holistic claim is that commodification is the essential means to master the demands of the recent intense Near Eastern Neolithic research insights and its extraordinary finds. For some time, Neolithic research has been moving away from mere artefact and subsistence studies, but could not yet develop a "pioneering" approach which integrates all previous approaches and can merge the tangible and intangible spheres of Neolithic life. It is our advocacy that commodification research can do so, and will fulfil and achieve a basic demand of archaeological research: to reconstruct the milieus of human ethos for the past on the basis of tangible material.
Neolithic commodification research will open new ways of understanding Neolithic life and its processes and systems, and represents an approach allowing to stay with the

artefacts and samples, rather than moving on to hypothetical essays. This contribution also tries to offer an approach to Neolithization through which its history becomes an instrument to understand our present-day life, a somehow repressed task of the historians.

Commodification is when things – tangible and intangible – become the subject of common acceptance and (re-) production, and thus receive a social value; develop a biography in the material and immaterial regimes/systems of Neolithic life; provide and influence social and individual identity and regulate relations among humans by the natural, built and cognitive/ideological environments they at the same time help to create and to develop; and interact with/direct subjects of other commodifications. The concept is the basis for a holistic understanding of productive societies, and would help to supersede the restricted understanding of prolific processes as e.g. by domestication theories. It leads to understand the individual artefact beyond empiricism, to comprehend its social meaning and potential relevance in reciprocity cycles, to reconstruct its cognitive ingredients like identity beyond direct ideo-political fixations in research. Neolithic commodification research distils Neolithic history.

Acknowledgements: I wish to express my sincere gratitude to all those of you who have contributed to my thinking about prehistory during the past decades, either through sharing thoughts personally or by teaching me through your publications. Even things of present-day life teach me about Neolithic prehistory. However, those from whom I have learned are not responsible for my recent approaches, which are characterized by some of the liberties typical of senior researchers. If I attempted to name everyone to whom I owe the intellectual debts which have made me able to write this article, I would be sure to forget several through unintended lapse of memory.

This initial article is dense, abridging, preliminary, possibly provocative to some, and has the deficiencies and imperfection characteristic for the introduction of a new understanding: I owe much to a small group of colleagues – among whom are Trevor Watkins, Bo Dahl Hermansen, Marion Benz, and members of the Ba'ja research group – who critically reviewed and discussed with me elements of this article, and prompted the first amendments. My future commodification research will constantly try to improve and refine the holistic agenda I offer here. I hope that our insights into Neolithic commodification will help us to better understand our present-day life modes, and to contribute to the awareness that we are in fact still part of a Neolithic trajectory.

I thank sincerely Craig Crossen for editing my English, and Marion Benz for bearing the pain of editorship. My gratitude also goes to Moritz Kinzel for his permission to use his reconstruction in Figure 7.

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