

1 General Description

1.1 Characteristics

1.1.1 Executive Board and committees

Collaborative Research Centre (SFB) 'RESOURCECULTURES, Executive Board:

Speaker:	Prof. Dr. Martin Bartelheim	
Vice speaker	Prof. Dr. Roland Hardenberg Prof. Dr. Jörn Staeker	
Scientific co-ordinator:	Dr. Anke Scholz	
Elected members:	Dr. Sabine Klocke-Daffa	Deputy: PD Dr. Simone Riehl
	Prof. Dr. Thomas Scholten	Deputy: Prof. Dr. Jörg Baten
	Prof. Dr. Peter Pfälzner	Deputy: Prof. Dr. Jens Kamlah
	Prof. Dr. Richard Posamentir	
Representative of Ph.D. holders:	Dr. Carsten Schmitt (equal opportunity commissioner)	Deputy: Dr. Paolo Sconzo
Representative of Ph.D. candidates:	Jessica Henkner	Deputy: Vincent Clausing

1.1.2 Project managers

Project Manager	Year of birth	Year of Ph.D.	Department	Project
Alex, Prof. Dr., Gabriele	1963	2003	Asien-Orient-Institut, Abt. für Ethnologie	C 06
Bartelheim, Prof. Dr., Martin	1964	1995	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Jüngere Urgeschichte und Frühgeschichte	A 02 / Ö / Z
Baten, Prof. Dr., Jörg	1965	1997	Fachbereich Wirtschaftswissenschaft, Abt. für Wirtschaftsgeschichte	B 06
Conard, Prof. Dr., Nicholas	1961	1990	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Ältere Urgeschichte und Quartärökologie	B 01
Floss, Prof. Dr., Harald	1960	1990	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Ältere Urgeschichte und Quartärökologie	B 01
Fuchs, Prof. Dr., Andreas	1960	1993	Institut für die Kulturen des Alten Orients, Abt. für Altorientalische Philologie	B 07
Härke, Prof. Dr., Heinrich	1949	1988	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Archäologie des Mittelalters	B 06 / C 07

Hardenberg, Prof. Dr., Roland	1967	1998	Asien-Orient-Institut, Abt. für Ethnologie	C 04 / C 07
Kamlah, Prof. Dr., Jens	1962	1999	Biblisch-Archäologisches Institut	A 05 / A 06
Klocke-Daffa, Dr., Sabine	1956	1998	Asien-Orient-Institut, Abt. für Ethnologie	Ö
Knopf, PD Dr., Thomas	1966	2000	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Jüngere Urgeschichte und Frühgeschichte	B 02
Krauß, Dr., Raiko	1973	2004	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Jüngere Urgeschichte und Frühgeschichte	A 01
Kühn, Dr., Peter	1964	2003	Forschungsbereich Geographie, Bodenkunde und Geomorphologie	B 02 / S
Männlein-Robert, Prof. Dr., Irmgard	1970	2000	Philologisches Seminar, Lehrstuhl Griechische Philologie	C 02
Meier, Prof. Dr., Mischa	1971	1998	Fachbereich Geschichtswissenschaft, Abt. für Alte Geschichte	C 02
Patzold, Prof. Dr., Steffen	1972	1999	Fachbereich Geschichtswissenschaft, Abt. für Mittelalterliche Geschichte	B 03
Pernicka, Prof. Dr., Ernst	1950	1976	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Jüngere Urgeschichte und Frühgeschichte	A 01
Pfälzner, Prof. Dr., Peter	1960	1991	Institut für die Kulturen des Alten Orients, Abt. für Vorderasiatische Archäologie	A 03 / A 04 / B 07
Posamentir, Prof. Dr., Richard	1967	2000	Institut für Klassische Archäologie	B 04
Riehl, PD Dr., Simone	1966	1999	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Ältere Urgeschichte und Quartärökologie	A 05
Schäfer, Prof. Dr., Thomas	1953	1982	Institut für Klassische Archäologie	B 05 / C 03
Scholten, Prof. Dr., Thomas	1960	1997	Forschungsbereich Geographie, Bodenkunde und Geomorphologie	B 02 / S
Staecker, Prof. Dr., Jörn	1961	1995	Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Abt. für Archäologie des Mittelalters	B 03 / C 05 / C 07

Stanzel, Prof. Dr., Karl-Heinz	1958	1987	Philologisches Seminar, Lehrstuhl Griechische Philologie	C 02
Wahl, Prof. Dr., Joachim	1954	1982	Landesamt für Denkmalpflege im Regierungspräsidium Stuttgart, Arbeitsstelle Konstanz	B 06

1.1.3 Participating Institutions

Eberhard Karls Universität Tübingen:

Evangelisch-Theologische Fakultät

Biblisch-Archäologisches Institut

Mathematisch-Naturwissenschaftliche Fakultät. Fachbereich Geowissenschaften

Forschungsbereich Geographie. AG Bodenkunde und Geomorphologie
 Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
 Abt. für Ältere Urgeschichte und Quartärökologie

Philosophische Fakultät. Fachbereich Altertums- und Kulturwissenschaften

Institut für Klassische Archäologie
 Institut für die Kulturen des Alten Orients (IANES)
 Abt. für Altorientalische Philologie
 Abt. für Vorderasiatische Archäologie
 Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
 Abt. für Jüngere Urgeschichte und Frühgeschichte
 Abt. für Archäologie des Mittelalters
 Philologisches Seminar

Philosophische Fakultät. Fachbereich Asien-Orient-Wissenschaften

Asien-Orient-Institut
 Abt. für Ethnologie

Philosophische Fakultät. Fachbereich Geschichtswissenschaft

Abt. für Alte Geschichte
 Abt. für Mittelalterliche Geschichte

Wirtschafts- und Sozialwissenschaftliche Fakultät. Fachbereich Wirtschaftswissenschaft

Abt. für Wirtschaftsgeschichte

Institutions outside the university:

Landesamt für Denkmalpflege im Regierungspräsidium Stuttgart, Arbeitsstelle Konstanz

1.1.4 Projects and Project Divisions

Project	Title	Academic Discipline	Project Managers, Departments
Project Division A: Developments			
A 01	Ressourcen und die Herausbildung von Ungleichheit. Rohstoffe und Kommunikationssysteme im prähistorischen Südosteuropa Resources and the Emergence of Inequality: Raw Materials and Communication Systems in Prehistoric South-Eastern Europe	Jüngere Ur- und Frühgeschichte, Archäometrie	Prof. Dr. E. Pernicka, Dr. R. Krauß, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
A 02	Viel Erz und wenig Wasser. Sozio-kultureller Wandel in Verbindung mit Ressourcennutzung in der jüngeren Vorgeschichte der iberischen Halbinsel Many Ores and Little Water: Socio-Cultural Change in Connection with the Resource Use in the Later Prehistory of the Iberian Peninsula	Jüngere Ur- und Frühgeschichte	Prof. Dr. M. Bartelheim, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
A 03	Steine aus dem Süden. Der Austausch von Ressourcen zwischen Mesopotamien und dem Gebiet des Persisch-Arabischen Golfs Stones from the South. Exchange of Resources between Mesopotamia and the Region of the Persian Gulf	Vorderasiatische Archäologie	Prof. Dr. P. Pfälzner, Institut für die Kulturen des Alten Orients
A 04	Die Entwicklung der Palast-RESSOURCENKULTUREN Syriens The Development of Palace- RESOURCECULTURES in Syria	Vorderasiatische Archäologie	Prof. Dr. P. Pfälzner, Institut für die Kulturen des Alten Orients
A 05	„Das Land, in dem Milch und Honig fließen“. Entwicklung und Bedeutung von Agrarressourcen im bronze- und eisenzeitlichen Palästina 'The Land Flowing with Milk and Honey'. Development and Significance of Agrarian Resources in Bronze- and Iron-Age Palestine	Biblische Archäologie, Archäobotanik	Prof. Dr. J. Kamlah, Biblisch-Archäologisches Institut PD Dr. S. Riehl, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
A 6	Politischer Kollaps als Folge ökonomischen Wandels? Ressourcenkontrolle am Übergang von der Bronze- zur Eisenzeit im Ostmittelmeerraum Political Collapse as a Consequence of Economic Changes? Control of Resources at the Transition from Bronze- to Iron Age in the Eastern Mediterranean	Biblische Archäologie	Prof. Dr. J. Kamlah, Biblisch-Archäologisches Institut

Project Division B: Movements			
B 01	Variabilität der Ressourcennutzung. Raumerschließung durch späte Neandertaler und frühe anatomisch moderne Menschen in Europa Variability of the Resource Use. Spatial Exploitation by Late Neanderthals and Early Modern Humans in Europe	Ältere Ur- und Frühgeschichte	Prof. Dr. H. Floss, Prof. Dr. N. Conard, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
B 02	Gunst – Ungunst? Ressourcenerschließung in Marginalräumen Favour-Disfavour? Development of Resources in Marginal Areas	Jüngere Ur- und Frühgeschichte, Bodenkunde	PD Dr. Th. Knopf, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters Dr. P. Kühn, Prof. Dr. Th. Scholten, Forschungsbereich Geographie
B 03	Ressourcenerschließung und Herrschaftsräume im Mittelalter: Klöster und Burgen Exploitation of Resources and Ruling areas in the Middle Ages: Monasteries and Castles	Archäologie des Mittelalters, Mittelalterliche Geschichte	Prof. Dr. J. Staecker, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters Prof. Dr. S. Patzold, Fachbereich Geschichtswissenschaft
B 04	Ressourcensuche als Auslöser von ‚Kolonisationsprozessen‘? Ursachenforschung zur Gründung griechischer Pflanzstädte zwischen Schwarzmeer und westlichem Mittelmeer The Search for Resources as an Incentive for 'Processes of Colonisation'? Causal Research Regarding the Foundation of Greek Settlements Between the Black Sea and the Western Mediterranean	Klassische Archäologie	Prof. Dr. R. Posamentir, Institut für Klassische Archäologie
B 05	Kolonisierung? Imperialismus? Provinzialisierung? – Ressourcen zwischen Konflikt und Integration im phönizisch-punischen Westen des 1. Jahrtausends v. Chr. Colonisation? Imperialism? Provincialisation? - Resources between Conflict and Integration in the West of the Phoenician-Punic West during the 1 st mill. BC	Klassische Archäologie	Prof. Dr. Th. Schäfer, Institut für Klassische Archäologie
B 06	Mensch und Ressourcen in Völkerwanderungszeit und frühem Mittelalter – Anthropologische und bioarchäologische Analysen zur Nutzung von Nahrungsressourcen und Detektion von Migrationsbewegungen Humans and Resources in the Migration Period and the Early Middle Age - Anthropological and Bio-Archaeological Analyses of the Use of Food Resources and the Detection of Migrations	Wirtschaftsgeschichte, Ur- und Frühgeschichte und Archäologie des Mittelalters, Anthropologie	Prof. Dr. J. Baten, Fachbereich Wirtschaftswissenschaft Prof. Dr. H. Härke, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters Prof. Dr. J. Wahl, Landesamt für Denkmalpflege im Regierungspräsidium Stuttgart, Arbeitsstelle Konstanz
B 07	Eine Jagd nach Rohstoffen? Die Expansion der mesopotamischen Staaten in die Gebirgländer des Nordens A Hunt for Raw-materials? The Expansion of Mesopotamian Empires into the Northern Mountain Regions	Altorientalische Philologie Vorderasiatische Archäologie	Prof. Dr. A. Fuchs, Prof. Dr. P. Pfälzner, Institut für die Kulturen des Alten Orients

Project Division C: Valuations			
C 02	Bilder des Mangels und des Überflusses: Ressourcen und ihre literarische Konstruktion im Kontext der ‚Griechischen Kolonisation‘. Images of Dearth and Abundance: Resources and their Literary Construction in the Context of the 'Greek Colonisation'	Griechische Philologie	Prof. Dr. I. Männlein-Robert, Prof. Dr. K.-H. Stanzel, Philologisches Seminar, Prof. Dr. M. Meier, Fachbereich Geschichtswissenschaft
C 03	Ressourcen und die Formierung von Gesellschaften, Siedlungsräumen und kulturellen Identitäten der italischen Halbinsel im ersten vorchristlichen Jahrtausend Resources and the Formation of Societies, Settlement Areas and Cultural Identities of the Italian Peninsula during the 1 st Millennium BC	Klassische Archäologie	Prof. Dr. Th. Schäfer, Institut für Klassische Archäologie
C 04	Religiöse Ressourcen: Wertschöpfung und Wertkonvertierung von Ressourcen in Zentral- und Südasiens Religious Resources: Achieving and Converting Resources in Central and Southern Asia	Ethnologie	Prof. Dr. R. Hardenberg, Asien-Orient-Institut
C 05	Profit und Verschwendung von Ressourcen. Die Schaffung von ideologischem Kapital während der Wikingerzeit und im Hochmittelalter in Nordeuropa Profit and Dissipation of Resources. Creation of Ideological Capital in the Viking Age and the Late Middle Age in Northern Europe	Archäologie des Mittelalters	Prof. Dr. J. Staecker, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters
C 06	Reis und Heilpflanzen. Die kulturelle Konstruktion nährender und heilender Pflanzen in Südindien Rice and Medicinal Plants. The Cultural Construction of Medicinal and Food Plants in Southern India	Ethnologie	Prof. Dr. G. Alex, Asien-Orient-Institut
C 07	Prähistorische Ikonen als Ressourcen in Vergangenheit und Gegenwart Prehistoric Icons as Resources in Past and Present	Ur- und Frühgeschichte und Archäologie des Mittelalters, Ethnologie	Prof. Dr. H. Härke, Prof. Dr. J. Staecker, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters Prof. Dr. R. Hardenberg, Asien-Orient-Institut

Special Projects		
Ö	Ressourcen und Öffentlichkeiten Public Relations Project: Resources and the Public	Prof. Dr. M. Bartelheim, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters Dr. S. Klocke-Daffa, Asien-Orient-Institut
S	Serviceprojekt Geowissenschaftliche und geoarchäologische Expertise Natural Scientific Service Project: Geo-Scientific and Geo-Archaeological Expertise	Prof. Dr. Th. Scholten, Dr. P. Kühn, Forschungsbereich Geographie
Z	Wissenschaftliche Koordination und zentrale Dienste Scientific Co-ordination; Central Administrative Project	Prof. Dr. M. Bartelheim, Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters

1.2 Collaborative Research Centre 1070: Scientific Outline

1.2.1 Research Programme: A Summary

The topic of the Collaborative Research Centre 1070 is socio-cultural dynamics in the use of resources. Resources are defined as tangible or intangible media, used by protagonists to create, sustain or vary social relations, units and identities. This definition abolishes the separation between natural and cultural resources. In our understanding, also resources that are taken from nature are affected and defined by cultural activity. On principle we assume that resources do not appear isolated, but instead as part of what we call *ResourceComplexes* (see p. 18), a combination of objects, individuals, knowledge and practices. Thus, the resource use includes the exploitation and production, as well as preparation, refining, distribution and use of socially relevant resources and ResourceComplexes. It triggers specific dynamics, multidimensional processes of change, which affect certain parts of a society or the society as a whole. Three of these socio-cultural dynamics are in the focus of the Collaborative Research Centre: DEVELOPMENTS, MOVEMENTS and VALUATIONS. Resources, the use of resources and the resulting dynamics interact closely with cultural conceptions and practices. These cultural preconditions determine significantly what is defined as a resource and how it has to be treated. Because they are variable, a comparative perspective allows to identify differing RESOURCECULTURES.

Socio-cultural dynamics related to the use of resources (and ResourceComplexes) will be analysed regarding their tangible and intangible dimensions. These analyses will be based on studies, covering extended periods and a diversity of cultures. To this end, a variety of social sciences, working on historical or present times, conjoined, including natural scientific methodology. The researchers cooperating in the Collaborative Research Centre strive to achieve four different aims:

1. to newly conceptualise the notion of resources used in cultural sciences
2. to identify diachronic socio-cultural developments
3. to understand processes of acquiring and developing space and identity creation
4. to determine the symbolic dimensions of resources

The Collaborative Research Centre perceives itself as an organic unit, within which the individual projects contribute to the central question about dynamics related to the use of resource (and ResourceComplexes), providing the special perspective of their respective discipline.

For several years the participating disciplines have been linked into a network for which the Collaborative Research Centre will establish more permanent structures. Intensive co-operations between participating researchers are already well-established. They will be further strengthened by shared contributions to projects, project divisions, sector divisions, on conferences, conventions, in work-shops, meetings and seminars. A strong cohesion will be guaranteed through methodological comparison, creating a multitude of connections between the individual research projects on three different levels (see p. 28). On the level of the Collaborative Research Centre as a whole, all affiliated projects will compare their specific models of RESOURCECULTURES, to enunciate and test hypotheses about socio-cultural dynamics connected to the resource use (ResourceComplexes). On the level of project and sector divisions variants of specific dynamics will be compared, to discuss comprehensive hypotheses. On project level finally a multitude of options for tangible comparisons exists (see point 3.5 in the description of particular projects). They can result from the study of dynamics within the same geological (e. g. Mediterranean) or chronological (e. g. 1. cent. BC) frame, as well as from studies of similar kinds of resources (e. g. prestige goods), or social or political units (e. g. public organisation).

First, the concept of the Collaborative Research Centre as a whole, works on the assumption of a contingency of specific RESOURCECULTURES (see p. 20). The assumption that resources and their use are not compulsory determined, but instead an expression of culturally variable requirements, opens up a perspective on a variety of differences in the perception and representation of the tangible, as well as of the intangible world. Second, the concept of the Collaborative Research Centre emphasizes the reciprocal interdependences between specific cultural orders, culturally relevant resources, the ways to use them and the resulting socio-cultural dynamics. These interdependences can be generalized, formulated and, in relation to selected processes, compared and analysed (see p. 21). This cultural-scientific approach has the particular advantage to offer possibilities to recognise and analyse the diversity within a great geographical and temporal range on one hand, and to point out and understand similarities, recurring phenomena and inherent interdependences on the other. Thus, the Collaborative Research Centre contributes to the current scientific as well as public discussion about resources. It promises, because of its interdisciplinary approach, entirely new perceptions and perspectives.

1.2.2 The Research Programme: A Detailed Presentation

a. Significant Aims

The four aims, mentioned above, will be achieved through an intensive cooperation between archaeologies (Prehistory, Medieval Archaeology, Scientific Archaeology, Classical Archaeology, Near Eastern Archaeology, Biblical Archaeology), philological disciplines (Classical Philology, Near Eastern Philology), historical disciplines (Ancient History, Medieval History, Economic History), geography (Anthropo-Geography, Physical Geography and Geopedology) and Ethnology. The shared concept of RESOURCECULTURES will be used and further advanced to achieve a better understanding of diachronic developments of societies, far-reaching processes of spatial exploitation and complex phenomena of symbolisation. These aims are:

A new conceptualization of the notion of resources in social sciences: In science as well as in public discussion the term 'resource' has been defined mainly in an economical sense and used in the context of modern conditions of production. In this context resources are often understood as a means to fulfil human needs and to accomplish daily life. This traditional concept focused the discussion on an efficient, rational and sustainable use of resources (e. g. Endres 2000; Endres/Querner 2000). During the last decades the social sciences expanded the definition of resources significantly. Especially intangible cultural assets (e. g. Bendix/Hemme/Tauschek 2007) and collectively used

resources (e. g. Haller 2010) were included. Still, little thought was given to the questions of how resources in different periods of time and under different cultural preconditions were defined and which forms of use were thought to be appropriate. These questions are especially relevant for those disciplines within the Collaborative Research Centre, who are dealing with periods or regions in which the 'modern' conceptions of industrialised societies are of little or no use at all. Contrary to the currently predominant position, viewing resources as universal factors of production in an economic context, the Collaborative Research Centre RESOURCECULTURES aims to point out culturally different kinds of perceptions, assessments and use of resources. This orientation will help to develop an alternative concept of resources and equally will facilitate a better understanding of the antique, medieval and modern social units studied in the projects. It is a fundamental necessity to newly conceptualise the relationship between resources and culture, to make it available as a means of analysis for cultural studies in different periods and areas. The Collaborative Research Centre 1070 will use the preliminary working definition of resources explained above (see also p. 16) and transfer it into a new concept for cultural sciences.

The identification of diachronic socio-cultural developments: Resources have been of outstanding importance for all human societies, even if they are a common topic of public and scientific discussion only since relatively recent times, triggered by the oil crisis of 1973 and the 1972 Club of Rome report 'Limits to growth'. They were needed not only for the survival of individuals in the context of subsistence and production, but for the forming of human societies as well, because the use of resources requires organisation, technical know-how, ways of distribution and consumption. Some of these emerging social units were multivalent, others specialised in political, economic, religious or commercial tasks in relation to the use of resources. In the course of time new social formations appeared, developing further or disappearing again, sometimes rather rapidly (Gramsch 2009; Kienlin 2012; Zimmermann 2012). Using a long-term perspective, spanning centuries or even millennia, the Collaborative Research Centre RESOURCECULTURES will clarify which resources were most significant for these social processes during human history, what kind of relation exists between the emergence of political control mechanisms and the resource use, and how change or crisis in communities affected the use of resources.

The understanding of processes of acquiring and developing space, and identity creation: Social units are in need of a multitude of tangible, as well as intangible, resources and only some of them are easily and continuously accessible. Often social units develop a demand for resources that cannot be acquired within their own region or sphere of influence, because they are difficult to access, are expended or simply do not exist there. The culturally defined interest in these resources frequently is an important aspect in the relations between spatially distant human groups. Resources that are required from a cultural point of view can be the base for the emergence or intensification of complex relations of exchange. Or, vice versa, relations of exchange and communication can be used to identify previously unknown or unused resources. Equally, culturally defined resources may trigger, intensify or expand colonialist or warlike enterprises (e. g. Balmuth 2000; Aubert 2001, 54–60). The opening up of new regions on the other hand, frequently affects the socio-cultural order and identity of the region of origin, for example as a cultural appropriation of tangible, as well as intangible goods. This may result in processes of social separation or a different self-perception. There will be a focus of research on the opening up for development of spatially distant resources. This should help to clarify the relation between the cultural definition of resources and the resulting kinds of mobility, exploitation, acquirement and identity creation.

The determination of the symbolic dimensions of resources: resources in several ways can be seen as symbols. The term 'symbol' describes objects, acts, events and relations that are used to transport ideas and beliefs – that is meanings – and represent 'models for' and 'models of the world' (Geertz 1973, 45; 93–94). First, the interest in resources is symbolically constituted – they are filled with meaning on the basis of ideas and values that are shared in various ways. This is also the case for the use of resources, which is regulated through norms that are deduced from symbolic orders of space, time and cosmos. Second, origin, possession and transfer of resources is represented and justified by a variety of symbolic forms or 'local narratives' (Gudeman 2012, 66-67), such as legends, myths, forms of memorising and others. Third, symbolic orders can be seen as resources for social units, for

example in architectural form (such as sacral buildings and palaces), standardised action (such as rituals and competitions), texts (such as religious, poetic or legal texts), or monuments (such as museums and memorials). The comparative perspective of the Collaborative Research Centre will allow to highlight these symbolic dimensions of resources in all their variety. It is the aim, to clarify the influence of symbolic orders on the conception and use of resources, to demonstrate the importance of symbolic representation for the legitimation of rights of possession, use and transfer of resources, and finally to illustrate the role of symbols as a collective resource for identities.

The definition of resources presently used, is a result of intensive discussion among the researchers participating in the Collaborative Research Centre, taking into account current debates (e. g. at HSozKult or Historikertag). It should be understood as a working definition, mainly used to identify relevant areas of research. Also, the presently used concept of resources is a useful heuristic tool to develop questions and hypotheses. Still it will be our aim during the first phase of the Collaborative Research Centre to expand the existing concept on the base of the results of the projects, to make it meet the following requirements:

- *Interdisciplinarity*: the concept will be a result of the combined work of scientists of different disciplines, participating in the Collaborative Research Centre, thus making sure that it will be of general relevance for cultural scientific research. On one hand it is meant to cover cultural diversity, on the other to be focussed in a way to make explicit definitions possible. In a long term perspective the concept will be used to identify and conceptualise new interdisciplinary topics for integrative research during the second and third phase of the Collaborative Research Centre.
- *Depth of time*: the definition of resources and the related hypotheses, methodical approaches, models and research targets will be designed in a way to demonstrate relationships from very distant times in a meaningful way. Especially the relation between resources and the emergence, continuation and transformation of various political or state orders will be illustrated.
- *Depth of space*: the concept will serve to clarify a variety of processes of spatial mobility, development and appropriation, such as acts of settling and colonising, in relation to the question of resources. This calls for an approach that identifies resources in the natural environment, as well as in cultural landscapes. It also has to consider different kinds of exchange of tangible, as well as intangible, resources and attend to the potentials and limits of different regions.
- *Multidimensionality*: In order to cover the symbolic dimension of resources, the concept has to consider the multidimensionality of cultural systems of meaning (e. g. Kertzer 1988). This includes condensation, when individual resources simultaneously have several meanings and an interaction occurs between these meanings, multivocality, when resources are interpreted in different ways within a society, and ambiguity that can be used politically to achieve consensus without a conformity of the meaning of resources.

b. Definitions: Resources, Cultures, RESOURCECULTURES

Resources

What are resources? In public discussions resources are understood mainly as natural raw-materials, needed for economic production or, in a broader sense, to provide support for human existence. This widely accepted, economically biased perspective was also used for the definition in the Deutsches Universalwörterbuch, quoting: '1. Naturally occurring asset of something, needed [permanently] for a special purpose, especially for the nutrition of human beings and for economic production processes, (...) 2. Asset of capital or source of funds, available to somebody' (Duden 2011, 1447; also see the paragraph on 'Ressourcen und Reserven' p. 18). In contrast to this definition, the economic sciences understand the term 'resources' in a much broader sense and from different economic perspectives. For example Müller-Christ differentiates between resource definitions in the context of input-transformation-output theory, the resource-based view and the means-end continuum. In the first case resources are considered as factors of production, in the second as organisational requirements for economic success and in the third as a variety of means to sustain systems (Müller-Christ 2011, 167–170). Here the differentiation between tangible (such as land, machines, or capital) and intangible resources (such as knowledge, relations, structures and others) is essential (Storberg 2002, 469). In economical context especially the analysis of intangible resources has been intensified during recent years (e. g. Mohladaschl 2007). Thus, a widening of the definition of resources becomes visible, also widely applied in the social sciences. Giddens for example, distinguishes between authoritative and

allocative resources, the first including means and skills to execute power, the second allowing access to material aspects of life (Giddens 1984, 258). Resources are understood in an even broader sense in Bourdieu's theory of capital. In this extended sense Bourdieu addresses, besides economic capital, cultural capital (meaning incorporated abilities, titles or assets), which are derived mainly from social capital as well. Or, in his definition: 'the sum of resources that accrue to an individual or group by virtue of possessing a durable network of more or less institutionalised relationships of mutual acquaintance and recognition.' (Bourdieu/Waquant 1992, 119). Meanwhile also Ethnology/Anthropology, influenced by sociological approaches, points out the role of resources as a means for social actors, social practice, but also for processes of delimitation and identification (e. g. Schlee 2006). In psychology as well, the definition of resources was expanded beyond economic contexts. The psychology of labour for example, differentiates between temporal and financial resources and control and stresses their embedment in social contracts (Greenblatt 2002, 179). Taking these developments in economy and social sciences into account, it seems all the more astonishing that the term 'resource' was rarely scrutinised from a cultural scientific perspective. There has been a somewhat growing interest in cultural resources during recent years, mainly stimulated by UN conventions on 'world cultural heritage' and 'intangible cultural heritage', biased strongly by modern European concepts (Bendix/Hemme/Tauschek 2007, 9). But still, in cultural sciences studies of the concept 'resource' are sparse. Neither in 'Cultural Theory. The Key Concepts' (Edgar/Sedgwick 2002), nor in the 'Handbuch der Kulturwissenschaften' (Jaeger et al. 2004), a handbook of three volumes and more than 1500 pages, a proper paragraph about resources is to be found. The same is true for the very popular 'Archaeology: An Introduction' (Greene/Moore 2010), meanwhile appearing in its fifth edition. Likewise dictionaries like Barnard & Spencer's all-encompassing ethnological 'Encyclopedia of Social and Cultural Anthropology' (1996), the 'Reallexikon der Assyriologie und Vorderasiatischen Archäologie', of up to now thirteen volumes, or the recently completed 35 volume 'Reallexikon der Germanischen Altertumskunde' have no separate entries covering 'resources'. Textbooks, like the 'DTV-Atlas zur Ethnologie', explain resources in a very conventional way under the headers 'environment and adaption' and 'economy' (Haller 2005, 135; 156). In 'Cultural Turns: Neuorientierungen in den Kulturwissenschaften' by Bachmann-Medick (2006) a variety of 'turns' or changes concerning different topics are documented, but none such about resources.

Resource Turn

How could we imagine such a *resource turn*? First it is necessary to consider the new developments in economic and social sciences and to expand the definition of term resources in order to cover the intangible dimension. Second, in concordance with approaches developed by culture theory, the essentialising perspective on resources has to be replaced by a functional one. This means that something cannot be considered to be a resource 'by nature' but only through its function in a specific context. Thus a resource is no longer a matter, but a means. Third, in the same way as was done in economic and social sciences, it has to be clarified that resources are not only important for the survival of individuals, but for the emergence, the continuity and the transformation of actors (individuals and groups) and their relations, networks, institutions or systems as well. Fourth, a particularity of cultural sciences, the hypothesis of contingency and variability of socio-cultural phenomena, has to be taken into account. This means that culture should not be reduced in a simplistic way to certain necessities, but has to be seen as a spectrum of potentials, that during different times and in different regions generated a diversity of beliefs, forms of organisation and practices. The resources themselves, as well as their social surrounding, using them as a means, are affected by this cultural ambiguity. This also includes raw-materials and natural products (e. g. water, timber, land, food), which are universally essential for human survival, but at the same time always are culturally connoted (see p. 21).

Deriving from these four points we can formulate a first working-definition of resources:

Resources are the basis for or a means to create, sustain and alter social relations, units and identities within the framework of culturally affected beliefs and practices.

This working definition can be expanded to cover some other important points:

- *Resources as a category for analyses*: scientific discourses about resources have used a wide variety of distinctions. Resources can be grouped as regenerative/non-regenerative,

limited/unlimited/, recyclable/non-recyclable, mobile/immobile, available/not available, detected/undetected and so on. Related to this are discourses about efficient, rational and sustainable resource use. These categorisations and discourses are strongly biased by capitalistic methods of production and, as such an outcome of cultural perceptions and practices of the recent processes of globalisation. Examining different times and regions, we have to ask the question, of how different human beings are or were perceiving and categorising resources. With this question in mind, we see that resources are no longer just an object of research, but instead a category of analysis, applicable to phenomena formerly not even included into the relevant semantic field. This 'transformation' from a matter into a category of analysis, according to Bachmann-Medick, 'is accompanied by a decisive change of the categorical level or even a conceptual leap' (2006, 26), because now the question is: Which cultural and social practices turn something into a resource?

- *The transformation of resources:* According to the approach used in the Collaborative Research Centre and described above, resources always go back to a cultural interest. Thus, the question 'what is a resource' depends strongly on the cultural context, existing practices and the interpretations of social actors. This context is transformed constantly, not only because beliefs and values are changing, but also because of the emergence of new technologies, new practices and new social contacts or differentiations. The notion of 'resource', thus is: 'variable in time as well: because of constant social, cultural, technological and economic changes, also the individual actor constantly has to redefine resources' (Niemann 2006, 9).
- *ResourceComplexes:* as a rule resources do not exist in an isolated way, but in combination with other resources as a ResourceComplex, which frequently consists of a combination of objects, persons, knowledge and practices. Often a specific resource needs other resources for its preservation, distribution or use. ResourceComplexes have a specific history of appearance and dispersion, affect each other and are evaluated or hierarchised in relation to each other. Our notion of ResourceComplexes approximately corresponds with the concept of 'base' used by Gudemann: 'Consisting of entities that people appropriate, make, allocate and use in relation to one another, the base is locally and historically formed. In the Latin American countryside, a farmer considers as base his house, land and crops; a university's base includes its library, laboratories, offices, communication systems and concepts, linking researchers (...)', (Gudeman 2005, 97).
- *Resources and reserves:* the word resource is derived from Latin surgere (to pour out from something). Thus it describes something that, unrelated to its use, is fed from a natural source that may eventually run dry (Niemann 2006, 7). In geo-sciences and economical sciences this point of view and particularly the question of the use, led to a conceptual differentiation of issues related to 'exhaustible natural resources' (such as oil or coal). The terms 'potential of nature' or potential of physical region' are used to describe the totality of the potential of a geographic region (Barsch/Bürger 1996). To express that the potential of a region is proven and can be exploited with the given technical facilities the term 'reserve' is used (Wacker/Blank 1999, 3–4). In this sense resources are 'the totality of existing raw-materials on earth, in which human society has an interest' (Niemann 2006, 11). For an approach in cultural sciences, these definitions are of rather limited use, since from a cultural scientific point of view, resources not necessarily have to be taken from nature and cannot be reduced to their economic function. In contrast to their definition in geo- or economic sciences, for the Collaborative Research Centre resources are not only a naturally existent potential, but affected by cultural concepts and accompanied by culture-specific behaviour. The focus of the Collaborative Research Centre is on resources or ResourceComplexes that are of central importance for essential social relations, units and identities. Thereby the term 'reserve' as well, obtains new meaning within the context of cultural sciences. It describes no longer just resources that are not (yet) economically exploited, but instead elements of a local culture, for example specific networks or religious practices, that can be put into use

during emergencies or ambiguous circumstances. Or, in Preissings words: 'The theory of reserves objects to the general tendency of globalisation-research, proclaiming the regression of local cultures in relation to the 'clash of (major-) cultures'. Instead it detects that in spite of all the real effects of globalisation and the integration into a global context, there is a fall back on local tangible and intangible cultural assets' (Preissing 2009, 69). Phenomena of globalisation aside, this definition of reserves can generally be applied by the Collaborative Research Centre on situations of foreign rule, such as colonisation and others.

- *Social relations and actors*: from the biological point of view resources provide the basis for human live. They 'are needed by organisms, to sustain their vital functions, their growing and their reproduction' (Hertler/Karl 2006, 21). The Collaborative Research Centre instead, focusses on resources that are not primarily relevant for the organic, but for the social aspects of live. This may not lead to the neglect of the study of individual actors, because social relations, without the activity of actors are just notional concepts. The question whether the resource related actions of specific *individuals* can be analysed has to be left open, because this depends on the different kind of data available for the different participating scientific disciplines. Still, the Collaborative Research Centre will have to consider the view of cultural scientists, who assume that such actors may be human or non-human. Latour (2008 [1991]) pointed out that the separation between nature and culture is artificial and often maintained on an ideological level, while neglected in practice. Latour stressed the point that objects as well are 'vocal' and possess their own agency and representation, thus advocating a 'symmetric anthropology'. Based on ethnographical studies Ingold as well argues against an ontological separation of man and nature. According to him, the field of social issues does not only cover the relations between human actors, but also between humans and animals, plants, ancestors, gods and other beings, to whom a social agency is assigned (Ingold 2000, 46).
- *Social units*: following Gudemann (2001, 25; 2012, 63–64) the Collaborative Research Centre understands the social units, within which the relations, explained above, are acted out and imagined, in the broadest possible sense. Taking into account the differences between the sources and the epistemological traditions of the participating disciplines, a distinct conceptual separation between community and society does not seem feasible. Instead they will have to stay within their own terminology. To facilitate interdisciplinary comparison the terms 'community' and 'society' are used in a polythetic way. They stand for a number of possible social distinctions that may have relevance for the comparison. This includes for example distinctions between homogenous and heterogeneous, real and imagined, predetermined and acquired status, territorial limitations and trans-local networks, as well as distinct group-identity and conceptually ambiguous individual identities.

In conclusion the working definition for resources given above can be expanded as follows:

Collaborative Research Centre 1070 understands 'resource' as a category for analysis, serving to expand the semantic horizon of the term by the use of comparative perspective. Resources generally are seen as basis or means to create, sustain and alter social relations, units and identities within the framework of culturally defined beliefs and practices. It is assumed that resources are variable not only culturally, but chronologically as well, and are affected by historical change. Resources often occur in ResourceComplexes, each having its own specific history of origin and distribution. They are bearing reference to others and are evaluated or hierarchised in their relation to each other. Acting on the fundamental assumption that resources (and ResourceComplexes) based on a culturally constructed interest, go along with learnt practices and do have social relevance, the Collaborative Research Centre studies resources (and ResourceComplexes) that are used and are of practical significance. The focus is on resources (and ResourceComplexes) that are of central importance for

basic social relations, units and identities. The use of resources implies the actions of actors, taking into account that a number of societies also consider non-human beings, such as animals, plants, ancestors or gods, to be actors with social relevance as well. These actors can be assigned to very different social units, distinguishable by categories, such as homogenous or heterogeneous, real or imagined, predetermined or acquired, territorially and socially limited or un-limited.

Cultures

'Culture' is amongst the most central, as well as controversial, concepts in cultural sciences. Used in a very broad sense by the public, as well as in science, it can refer to the arts, just as to consistent characteristics of people of common origin, or to shared customs, traditions and beliefs of specific societies (Beer 2012, 54–55). Relevant for the Collaborative Research Centre is a different definition of culture: a scientific concept (Beer 2012, 55), opening up certain perspectives and ways of interpretation related to resources. Recently a number of papers and books appeared, trying to provide an overview over the different definitions and the critical discussion about the concepts of culture (e. g. Beer 2012, Bernbeck 1997, Brather 2001, Edgar/Sedwick 2002, Eggert 2008, 303–316; Fröhlich 2000, Hammel 2007; Reckwitz 2004). For our purpose, especially the schematic classifications of different concepts of culture are helpful. Reckwitz (2004, 3) for instance, distinguishes between concepts of culture that are 'normative, **totality-oriented, based on differentiation theory, or significance oriented**'. Approaches are divided into those that focus on either structures, subjects, discourses or practices as central for the concept of culture (Reckwitz, 2004, 14–19). Bettina Beer as well points out the differing conceptuality and perspectives within the debate about culture and distinguishes between ideational (or mentalistic) and materialistic concepts and also refers to combinations of these approaches (Beer 2012, 60–62). Even more comprehensive is the classification of approaches by Haller (2005, 31–37), identifying nine different opposing pairs or 'ideal types'. As for the Collaborative Research Centre, it is needed to respect the plurality of perspectives, in order to facilitate the input of differing points of view into the interdisciplinary discourse. On the other hand, an elaboration of the definition of 'culture' seems necessary, since all assumptions about culture determine two of the central concepts used by the Collaborative Research Centre: ResourceComplexes and socio-cultural dynamics.

What are the basic assumptions, underlying these concepts? For the Collaborative research Centre the interpretative or significance-oriented discourse about the definition of culture seems to be of special relevance. According to this point of view, human beings during all of their history existed within a world of meanings (Geertz 1973), expressed through language, knowledge, objects, bodies, symbols, as well as through a wide variety of practices and performances (Reckwitz, 2004, 7). Meanings consist of beliefs and practices. They are learnt and in various ways shared or put into action. This world of meaning is not chaotic and orderless, but ordered and regulated or systematically interconnected, to result in a 'more or less structured whole' (Beer 2012, 56) or a 'meaningful whole' (Reckwitz 2004, 7), which in turn is affected by changes and processes, caused by the interaction of actors (Haller 2005, 31). Significant for the Collaborative Research Centre is the assumption that these structured worlds of meaning are contingent, or as pointed out by Reckwitz: 'Now the realisation becomes significant that all complexes of practices in past and present (...) become contingent only by their respective, very specific horizons of reason and codes of meanings, thus becoming 'normal' or 'rational', or even appearing as 'essential' or 'natural'" (2004, 8). Acting on the basic assumption of cultural contingency, the Collaborative Research Centre, studying a wide spatial and temporal variety, always uses the term 'culture' in plural.

This leads us to a tentative working definition:

Cultures are systems of meaning, learnt and shared in various ways, and are expressed empirically for example by language, writing, texts, knowledge, objects, bodies, institutions, symbols and a wide variety of actions.

Considering the specific combination of disciplines within the Collaborative Research Centre and the resulting debates, this working definition requires some additions.

- *Materiality*: Many resources studied by classical and ancient studies and Ethnology/Anthropology are of a tangible character. Analyses of materiality used to address physical characteristics of different artefacts. During recent decades the symbolic and social meanings of objects, artefacts or consumer products found a growing attention (Miller 1987; Hahn 1996, 2005, Tilley 2007). In analyses of material culture tangible objects are put into relation with other objects, landscapes or individuals and their actions. In this respect in classical and ancient studies, as well as Ethnology/Anthropology, a tendency towards materiality seems perceivable, that is a tendency towards contextually changing meanings of tangible objects, to their similarities and differences, to their places of origin, production processes and sedimentation areas (Tilley 2007, 18). During recent years, especially influenced by the writings of Latour (2008 [1991]) and Ingold (2000, 2007), a discussion (e. g. in: Archeological Dialogues 2007) about the interrelationships between the characteristics of tangible objects, human representations and social relations arose, in which it has been argued that ideas and meanings are not only assigned to objects, but originate only through the contact with tangible objects (Renfrew 2001, 127). Ingold points out the necessity to include practical know-how in dealings with the tangible world (such as the cutting of trees) into the analysis of tangible culture. Conceptually, Ingold questions the separation between tangible world and social relations, because human beings themselves are part of the tangible, animate world and in constant interaction, i.e. in social relation, to other objects (Ingold 2007, 7). A crucial point in this discussion is the question, to what extent the tangible characteristics of objects have their own agency. This leads to further questions, such as which options or limitations tangible things have for human beings or why only certain characteristics of objects influence their lives, while others do not (Tilley 2007, 20).

- *Basic functions of existence*: the cultural dimension of resources does not exclude the fact that resources of social relevance may possess a basic function for the survival of human organisms as well. But the hypothesis of contingency stresses the point that resource use is not determined in a predictable or inevitable way by this existence-related function, as was highlighted especially by studies of the cultural variability of food and drink (e. g. Douglas 1987, Germov/Williams 2008, Macbeth 1997). On the other hand, especially in ethnological/anthropological studies (Leach 2003) it became clear, that both, functions essential for survival and practices necessary for exploitation, distribution and consumption, are of enormous social relevance. Thus, nutrition can be used to express social hierarchies, to construct kinship or cosmology related connections, to assign moral codes or to exchange messages. In short: nutrition can be used to construct 'personae' (e. g. Carsten 2004). Subsistence related activities, just as practices of distribution and consumption, are frequently the cause to shape, renew or change social relations, between genders, generations, age groups or ethnic groups and many others. Consequently the Collaborative Research Centre does not accept a discrepancy between the subsistence related functions of resources and their cultural construction, since frequently the resources relevant for subsistence and the practices related to them, are the ones to which cultural meaning is particularly assigned .

- *Comparability*: amongst other things, the interpretative change in cultural sciences caused a fundamental questioning of methods and categories for comparison (Hardenberg 2008; Holy 1987; Kaelble/Schriewer 2003; Osterhammel 2004). According to Holy most important was the understanding that social matters cannot be viewed in the same way as objects, because they do not exist, except through human action, but instead are inseparably connected to the process of the assignment of meaning by human beings. By this, all the monothetic categories of comparison became questionable that were formerly thought to be 'airtight' and used to compile complex typologies of societies (e. g. the Human relation Area Files by Murdock) or to establish controlled 'crosscultural' comparisons (see Mace/Pagel 1994). They had to be replaced by Needham's (1975) concept of 'polythetic classes', loosely based on Wittgenstein. Also the singular concept of culture was increasingly replaced by a nonsingular concept, placing diversity and differences into the focus of analysis. Are, under these terms, comparisons still feasible? In Holy's (1987) opinion, since the interpretive change,

comparisons serve to formulate and illustrate differences by contrasting case examples. Thus, comparisons are mainly of heuristic value and refer to aspects, undetectable when studying only single cases. On the other hand, comparisons can serve to point out formal similarities, regarding analogical courses of action or repetitive principles of composition and structure. What is the focus of such comparisons in cultural sciences? Generally it will be on phenomena and processes, some chorographically or chronologically connected, but unrelated ones as well. According to Osterhammel 'transcultural comparisons, extending over cultural borders (...) are reasonable and feasible, if the units used to compare are not regarded as fixed constants, but instead as historically changeable and negotiable' (2004, 62). In the anthology 'Komparatistik in den Sozial-, Geschichts- und Kulturwissenschaften' edited by Kaelble/Schriewer (2003), Siegrist as well stated the aim of a comparative historical science as to apprehend, understand and explain the general as well as the specific appearance, meaning and function of a phenomenon in time and space, working on the assumption that general human abilities and requirements and basic ways of acting do exist, but always specifically structured and shaped by their society, culture and history (Siegrist 2003, 306). In this way generalisations about society and culture are sought, but always put into perspective and differentiated, reflecting their chorographical and chronological, as well as subjective and objective standing (ibid). For the Collaborative Research Centre especially the transcultural comparison of processes will be of relevance. Specific processes, relevant in relation to resources, such as social development, spatial development, value creation, conflict, sacralisation or 'resource curse' are compared, in order to elaborate differences as well as formal similarities.

- *The 'social' and the 'cultural'*: in a number of approaches in cultural sciences, especially those influenced by Talcott Parson's AGIL paradigm (Parson 1970), a clear distinction between the social system of integration on one hand, and the cultural system of assigning meaning is made. This approach tends to systematically separate political, economic, social and cultural aspects, and subsequently to relate them to each other by explanations (e. g. of change). The 'social', especially observable social relations, here often is understood as real, the 'cultural' on the other hand, as an ideological means to sustain the social system. In contrast to this, the Collaborative Research Centre applies a holistic view, such as developed notably by Sahlins (e. g. 2000): „In all its dimensions, including the social and the material, human existence is symbolically constituted, which is to say, culturally ordered“ (Sahlins 1999b, 400). The term 'socio-cultural', thus is used to express the assumption that the perception and the use of resources leads to dynamics referring to social relations, units and identities, that are always constructed symbolically beforehand.

According to these considerations the working definition of 'cultures' used by the Collaborative Research Centre can be specified as follows:

Cultures are systems of meaning, learnt and shared in various ways, and are expressed empirically for example by language, writing, texts, knowledge, objects, bodies, institutions, symbols and a wide variety of actions. The aspects of these systems of meaning are interrelated and result in a more or less meaningful whole. The systems of meaning are assigned to the tangible world, but a strict dichotomy between tangible and intangible has to be avoided, because human beings themselves are part of the tangible world. The fact that the contextually changing characteristics of objects and matters (including resources) affect the emergence of systems of meaning and their related practices has to be kept in mind. Cultures are contingent, their respective beliefs and practices, and the ways these change, cannot be reduced to general or natural conditions, but instead are a result of specific horizons of meaning. Presupposing cultural contingency, comparisons in cultural sciences use polythetic categories and are focused on the understanding of cultural difference by contrasting or on the investigating of formal similarities, such as analogical courses of action or repetitive principles of composition and structure. The assumption of contingency does not imply that the importance of resources for basic human needs is denied. Instead it stresses the point that the perception and use of resources is not determined by general or natural principles. Still it is

assumed that especially those resources needed for human subsistence and survival as well as practices related to those, are those to which cultural meaning is assigned. The perception and use of resources leads to dynamics referring to social relations, units and identities that are always constructed symbolically beforehand.

RESOURCECULTURES

What are RESOURCECULTURES? The elaborations above lead to the following assumptions:

1. The perspective on resources is always affected by culture, this means it is shaped by beliefs, values and practices that are learnt and shared in various ways.
2. The resource use, that is their exploitation and production, their distribution, their consumption and their representation, is specific for every individual culture as well.
3. Resources are used by socially interrelated humans, according to their specific interests. Thus, resources affect the organisation and constitution of social life. They are fundamental or means for the creation, sustaining or altering of social interactions.
4. RESOURCECULTURES can be categorised in different ways:
 - according to the resources
 - according to social forms of use (beliefs, values, practices) and
 - according to social relations, orders or identities.
5. RESOURCECULTURES are not static, but affected by specific socio-cultural dynamics. These dynamics are not deterministic or inevitable, but multidimensional and open instead.
 - DEVELOPMENTS: by the use of resources cultures are developed and transformed, just as social processes affect resource use.
 - MOVEMENTS: culturally constructed interest in resources leads to spatial development and processes of resource acquisition. This in turn influences social orders and units.
 - VALUATIONS: symbolic representations, on one hand do have an effect on the identification and the use of resources, on the other hand they themselves can turn into resources for the community.

Summarising, it can be stated:

RESOURCECULTURES can be seen as specific, dynamic models connecting certain resources, social forms of use, social relations, units and identities in a contingent, meaningful way.

c. Scientific Structure of the Collaborative Research Centre

It is the aim of the Collaborative Research Centre to develop a new cultural scientific concept of resources, which will be applied on the analysis of socio-cultural dynamics related to resource use. To achieve this aim, starting with the archaeologies and historical sciences, scientists of various disciplines in Tübingen, teamed up for close cooperation. To develop a common concept, a considerable number of meetings, joint courses, interdisciplinary lecture series and workshops were held during recent years. During this preparatory work some hypotheses were formed that led to the designing of project divisions and sector divisions within the Collaborative Research Centre:

- The first hypothesis is that resources are of decisive importance to various socio-cultural dynamics. Across time and space especially three dynamics related to RESOURCECULTURES can be observed: a) DEVELOPMENTS: resources and processes of social change; b) MOVEMENTS: resources and spatial development; c) VALUATIONS: resources and the symbolic dimensions of culture.
- The second hypothesis is that resources can turn into a curse, that resources are significantly involved in conflicts and that they, if related to processes of sacralisation, can produce or reproduce inequalities or hierarchies.

These hypotheses and considerations resulted in a structure for the Collaborative Research Centre that can be represented as a rotary disc. The model consists of two discs. The outer ring includes the

three central project divisions, the inner one the three sector divisions. Thus, the outer circle is divided into the project divisions A (DEVELOPMENTS), B (MOVEMENTS) and C (VALUATIONS). The inner circle depicts the sector divisions, substantively connecting researchers and projects beyond their assignment to the project divisions. The model works with rotating discs to demonstrate that the assignments are not inflexible and irreversible, but instead can be combined in a multitude of ways.

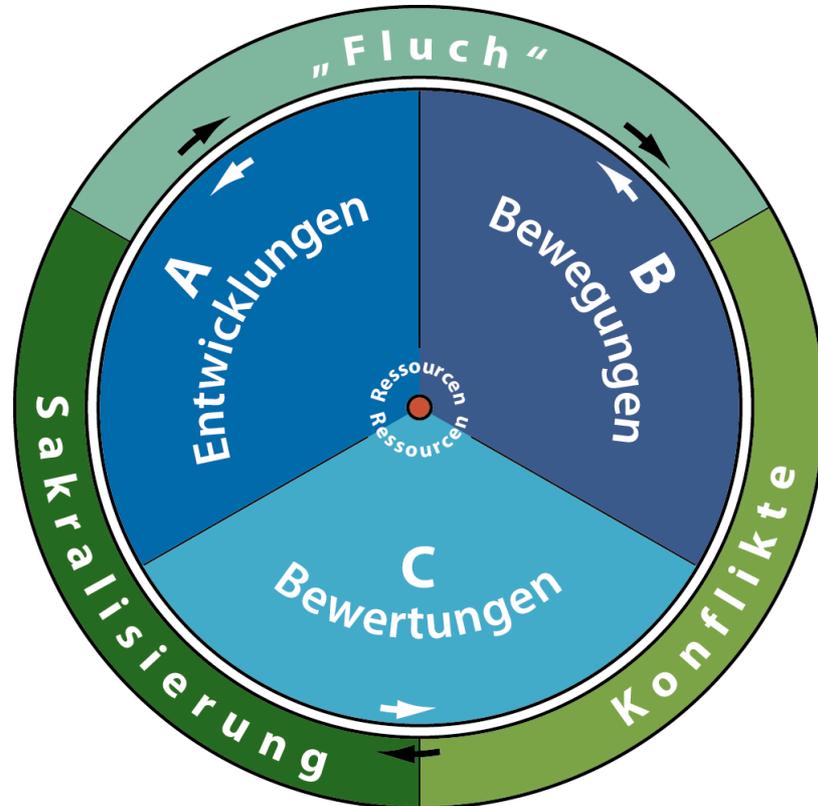


Fig. 1: The structure of the Collaborative Research Centre (without the individual projects) using a rotary disc model

Each project division will have two co-ordinators, whose task will be to fine-tune the work within the project divisions and to stimulate discussion through collective activities (workshops, symposia, publications).

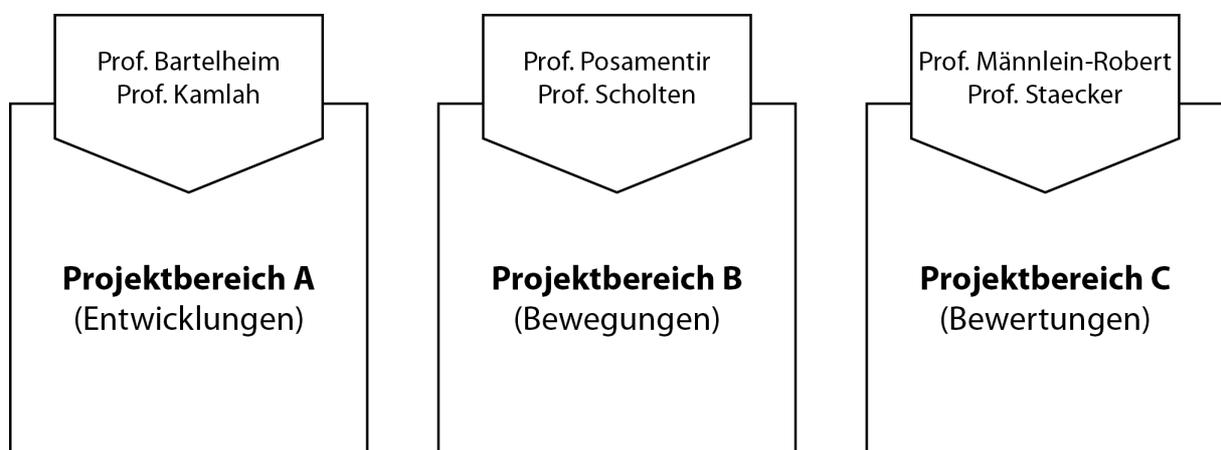


Fig. 2: Co-Ordination of project divisions A, B, C

Project Division A. DEVELOPMENTS. Resources and Processes of Social Change

Project division A. DEVELOPMENTS concentrates on diachronic studies about the role of resources in processes of social and cultural change. The focus will be on historical situations in which access to raw-materials and natural products was granted locally, regionally or continuously through established ways of distribution. The thematic key aspects of the case studies will be questions addressing resources and the emergence of hierarchies in prehistoric Europe, as well as resource use and the formation of states in the ancient Near East and the Mediterranean.

Project Division B. MOVEMENTS. Resources and Spatial Development

Project division B. MOVEMENTS examines resources within the context of processes of spatial development and settlement, discussing resources as a point of central importance for these processes. There will be a focus on resource related preconditions for spatial development, but courses of event, further socio-cultural developments within the newly acquired region, as well as symbolic dimensions of the relevant resources will be included into the research.

Project Division C. VALUATIONS. Resources and the Symbolic Dimensions of Cultures

The projects of division C. VALUATIONS are treating the aspect of value creation by resources. The central topic of the studies will be about valuation, meaning and use of resources in different contexts. The different kinds, media and contents of cultural representations of resources and resource dynamics will be addressed and the social effectiveness of the symbolic dimension of resources will be discussed. Additionally the projects will examine how reassessments, symbolisations and conversions account for the contextual change of meaning of resources, thus allowing different kinds of value creation.

Sector Divisions

The three sector divisions serve to interconnect scientists participating in the Collaborative Research Centre, beyond their assignment to specific project divisions, to create an interdisciplinary discourse about central questions concerning resources. There will be no strict assignments to groups within the sector divisions, but open networks of researchers, meeting for workshops, lectures, colloquia and conferences. The sector divisions will be co-ordinated by three project managers. Their task mainly will be the organisation and realisation of conferences (see page 26).



Fig. 3: Co-ordination of sector divisions

In practice the following topics will be addressed:

Curse

The term curse of resource was introduced by economists during the 1990's. At its base is the observation that countries with an abundance of raw-materials (e. g. in Africa or Latin-America) are developing worse than countries having far less resources within their territory (e. g. in Eastern Asia) (see Auty 1993; Ross 1999 and others). The resource curse is understood in a more comprehensive way by the Collaborative Research Centre. On one hand, it is not only the abundance of resources that is taken into account, but the abundance of resources relevant for the actors. On the other hand, the paradox of negative development in connection with abundance will not be reduced to economic context alone. Amongst others, the consequences for environment, the stability of social orders and the readiness for innovation and change will be taken into account.

Conflict

The resources studied by the Collaborative Research Centre are of social importance and are used for highly significant activities. Because of this they often are catalyst for conflicts of interests. These conflicts can destroy social relations, but paradoxically also can contribute to social cohesiveness, because comprehensive institutions may emerge within the context of conflict resolution (Eckert 2004, 7-8). According to our hypothesis, a mutual interrelationship exists between a specific resource culture and the conflicts characteristic for it. This means that social order is influencing, which resources can trigger conflicts and how the conflicts are settled. In turn the conflicts and the resulting measures to settle them affect the social units and cause social change. Not least, it has to be considered that conflicts themselves may constitute a culture specific resource.

Sacralisation

It was stated already by Durkheim (1912) that a group will worship and deify what is essential for its identity and existence. The resources in the focus of the Collaborative Research Centre are of central importance for the emergence, maintaining and transforming of social units. Thus, according to our hypothesis, they often are the subject of processes of sacralisation. These processes can turn resources, or even symbolic representations of resources, into sacred objects. The source of supply for these resources equally may be sacralised. Sacral here is understood as being removed from the normal course of live, being subject to specific rules and especially prohibitions and only to be used in a compulsory way. Sacralisation often goes hand in hand with a creation of sacred places or objects and a development of rituals and collective commemoration. Which resources are held as sacred or profane and how categories, such as sacral or secular, religious or mundane, spiritual or worldly etc. are defined, is dictated by historical change, contextualisation and processes of negotiation.

Theories – Methods – Perspectives

On different levels and with different functions all researchers participating in the Collaborative Research Centre 1070 will further develop theories, methods and perspectives. In this respect the scientific coordinator plays a central role, by stimulating the cooperation of individual scientists and synchronising events and procedures with regard to contents and time. He will closely cooperate with the coordinators of project divisions (A. DEVELOPMENTS, B. MOVEMENTS, C. VALUATIONS), the coordinators of section divisions (curse, conflict, sacralisation), as well as with the Ph.D. holders and graduate researchers of the Collaborative Research Centre in order to arrange conferences. To this means he regularly has to gain an overview over the theoretical and methodical developments in the projects, he will give keynote speeches during meetings, symposia and conferences and will summarise and publish, together with other scientists of the Collaborative Research Centre, relevant results in scientific papers.

Two major tasks are assigned to the coordinators of project- and sector divisions: first, they will organise regular meetings for the project managers to discuss their shared research interests, to reflect on new theoretic and methodical approaches and to further develop them by their own research. Second, they will organise and hold one conference each, including all the projects. The conference of project divisions A, B, C will be held during the first year of the initial phase of funding, mainly discussing subjects, closely linked to each other in terms of content (about the divisions A, B, C

see p. 25). The conference of sector divisions will be held during the third year of the initial funding period, to presenting the results of projects in relation to the sector themes (curse, conflict, sacralisation).

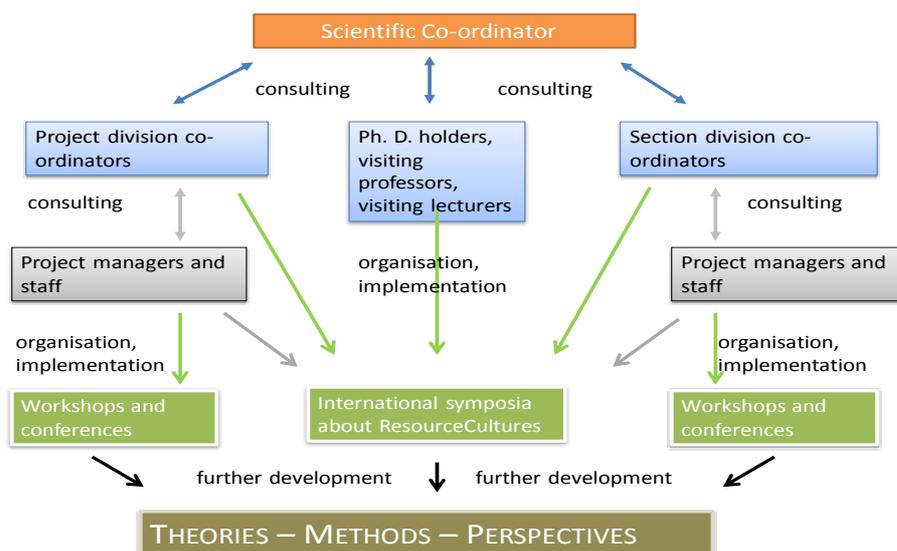


Fig. 4: Shared development of Theories – Methods - Perspectives

In Addition to these two conferences, individual projects will organise their own workshops and exhibitions about their specific fields of research, especially including the participants on postdoc level. The Ph.D. holders are a distinct group within the Collaborative Research Centre, meeting at regular intervals. In cooperation with the scientific co-ordinator and the division co-ordinators they are responsible for the planning and holding of two international symposia about 'RESOURCECULTURES', taking place during the second and at the beginning of the fourth year of the initial funding period. The shared scientific results of these symposia will be published in a distinct series of publications of Collaborative Research Centre 1070, with special focus on the history of research and the further development of theories, methods and perspectives. The co-ordinators of all three sector divisions may apply for one semester of research leave of absence funded by the Collaborative Research Centre, in order to produce their contribution for the debate about resources.

It is planned to summarise and re-evaluate the history of research about resources, to transform our preliminary definitions into a concept of resources for cultural sciences, in order to develop the future subjects, questions and issues and the relating projects for the next phases of funding.

time frame	event	organised by
1. year of funding	1. Conference: 'Developments – Movements – Valuations'	Scientific Co-Ordinator Co-Ordinators Project Divisions Scientific Co-Ordinator
2. year of funding	1. International symposium: 'RESOURCECULTURES'	Postdocs Co-Ordinators Project Divisions and Section Divisions Scientific Co-Ordinator
3. year of funding	2. Conference: 'Curse – Conflicts – Sacralisation'	Co-Ordinators Project Section Divisions Scientific Co-Ordinator
4. year of funding	2. International symposium: 'RESOURCECULTURES'	Postdocs Co-Ordinators Project Divisions and Section Divisions

Fig. 5: schematic overview over conferences and symposia during the initial phase of funding

Individual Disciplines within the Collaborative Research Centre

RESOURCECULTURES are a distinctly complex subject for research. This is exemplified by the diversity and variety of research topics studied by the 22 different projects of Collaborative Research Centre 1070. Each project will concentrate on its own focal points, thus contributing to a broad overall picture. Still the individual projects can only be successful by mutually supporting each other. In this way the Collaborative Research Centre constitutes itself as a structure, based on shared work and cooperation. The participating researchers, coming from different disciplines with different kinds of sources, methods and internal discourses, provide specific knowledge and professional skills. The archaeologies (Prehistory, Medieval Archaeology, Classical Archaeology, Near Eastern Archaeology, Biblical Archaeology) are distinguished by their long-term perspective, often spanning millennia, and their knowledge about tangible resources. In this, they will be complemented by the natural sciences (Scientific Archaeology), with their significant methods for analysis of materials. Geology (Anthropo-Geography, Physical Geography and Pedology) have great expertise about man-environment relations and, just as the archaeologies, uses natural scientific methods to reach major conclusions about soils, animals and plants in past and present. The participating philological disciplines (Classical Philology, Near Eastern Philology), like the archaeologies, provide insight into long-term developments, but because of the specific character of their sources (literature, myths, poetry) and methods of analysis they are able to open up even the linguistic and symbolic dimensions of resources and resource use. The historical sciences (Ancient History, Medieval History, Economic History) share this capability, while putting emphasis on different periods and questions, in analysing RESOURCECULTURES. Ethnology, finally provides data from different cultural contexts and, because of its empirical methods, is able to illustrate and explain currently existing resource dynamics.

It is possible, and indeed desirable, to add more disciplines, like Egyptology, Cultural Anthropology or Media Studies, during the following phases of funding of the Collaborative Research Centre that will complement and complete the existing diversity and variety. Expanding in this way will not negatively affect the coherence, because the Collaborative Research Centre, through its core-disciplines, will have a specific identity, consolidated by the established cooperation between archaeologies and Ethnology. Since their establishment until present, these disciplines are closely connected, or even considered to be identical, within American Cultural Anthropology. In Europe as well, a considerable number of institutions and research associations with intensive and most successful cooperation between archaeologies and historical sciences and Ethnology/Anthropology exist. Both disciplines share an interest in the diversity of human ways of life, in the creativity of adaptation and in the ability for cultural innovation that can be exemplified especially by making use of spatial or temporal distance to one's own society. This also will be expressed by interdisciplinary comparisons and theories concerning RESOURCECULTURES.

Comparisons and Hypotheses

The individual projects within the Collaborative Research Centre will be linked on three different levels, by the method of comparison. On the first level, comprising the Collaborative Research Centre as a whole, comparison will be applied to the models, formulated by the projects on the basis of their scientific data. These models depict RESOURCECULTURES, the interrelationships between resources, the use and handling of these resources and socio-cultural dynamics. On this superordinate level, based on the comparison of RESOURCECULTURES, specific hypotheses will be formulated and tested. Because RESOURCECULTURES are understood as models, within which individual elements are contingently interrelated to each other, hypotheses will be formulated in a way to question and challenge conventional explanations, while presenting alternatives, such as:

- In a long-term perspective, resource use does not necessarily create a linear development of always more complex structures, but instead can lead to sinuous fluctuation in the formation of hierarchies;
- The culturally determined demand for resources is not necessarily the catalyst for spatial expansion, but instead often is the result of spatial movements and new experiences, ideas, identities and practices, related to them;
- When valuations change, this does not necessarily imply that resource complexes lose their importance for a society, but instead they can be kept as reserves with the option of being re-activated even after expanded periods of time.

On a second level of the Collaborative Research Centre, the level of project- and sector-divisions, comparison will be applied on specific dynamics and their variants. Here comparison will serve to formulate and test various comprehensive hypotheses, resulting from cooperative contemplation of specific dynamics, such as:

- Project division A: empires, territorial states, city-states or petty states, as well as non-national social units develop their own specific ways to control resource complexes;
- Project division B: not only material resources are an indispensable part of the resource complex for colonisation and migration, but even more so working systems of exchange;
- Project division C: resources possess a variety of symbolic meanings, activated and used especially by the conversion of values;
- Sector division ‚curse‘: an abundance of highly valued resources (‘blessing’) can turn into a ‘curse’, if the institutional knowledge necessary for the exploitation and use of these resources is not sufficiently available or accessible only to few individuals or groups;
- Sector division ‚conflicts‘: conflicts triggered by the demand for resources do not necessarily have disintegrative effects on social relations, but may lead to the emergence of new means of social integration;
- Sector division ‚sacralisation‘: the social relevance of resources does not necessarily help to widely distribute them, but instead may result in the sacralisation of common resources, increasingly depriving a majority of the population of their use.

The individual projects, comprising the third level, will allow a multitude of comparisons between the different research interests. Each project identified specific points of contact to other projects (compare point 3.5 of project descriptions), within its own project division, as well as in others. These links often are based on shared similarities, such as dynamics within the same spatial (e. g. Mediterranean) or chronological (e. g. 1st millennium BC) frame, similar resources (e. g. prestige goods) or social and political units (e. g. state organisation).

On all levels, because of the contingency of the phenomena studied, comparison in interdisciplinary, cultural-scientific context will not be applied to identical ‘things’ and will not be used to formulate laws. Instead comparisons of the type explained above (see p. 28) will serve two different purposes: they will be of heuristic value and refer to aspects, otherwise unnoticed. And they can shed light on similarities, differences and variations of dynamics, principles of composition and structure and models of explanation.

d. Initial Phase and First Period of Funding

The Collaborative Research Centre is based on a wealth of experience in collaboration between the participating disciplines at Tübingen University, established over the years through interdisciplinary seminars, colloquia, conferences and cooperative projects. Starting point for this was the research association ‘Naturraum – Ressourcen – Landwirtschaft’ (‘landscape – resources - agriculture’) within a research priority programme funded by the federal state of Baden-Württemberg. Prehistory, Medieval Archaeology, Classical Archaeology, Near Eastern Archaeology, Greek Studies and Numismatics were among the participants. A resulting international conference with the title ‘Ressourcenknappheit und Versorgungsstrategien’ (‘Scarcity of resources and strategies for supply’) in 2008 was funded by the Fritz-Thyssen-Stiftung. The contacts to colleagues from other universities and institutions during this period led to a tight network of institutions in Germany and abroad, sharing common research interests, of which the Collaborative Research Centre will profit from its beginning on.

During the initial phase of funding the Collaborative Research Centre has to reach five *milestones*:

1. The successful accomplishment of the projects, manifesting itself in completed dissertations and other, prominently published publications.
2. The further development of the concept of resources, visible by the progressing definitional work and the further development of the theoretical fundament.
3. The circulation and distribution of scientific results by public relation, resulting in a positive effect for our profile in media and science didactics.

4. A harmonisation of methodology in the participating disciplines, showing itself by an even closer and content related cooperation.
5. The elaboration of similarities, differences and variants of RESOURCECULTURES, allowing the identification of further socio-cultural dynamics, as well as the development of new common aims of the Collaborative Research Centre, for the subsequent phases of funding.

These *milestones* will be reached by the following steps:

- Integration of projects within the Collaborative research Centre by a regularly held research colloquium.
- Organisation and realisation of symposia, conferences and workshops especially focussing on theoretic and methodological issues, research leave for professors and scientific co-ordinators.
- Setting up of subject related sector divisions, to strengthen the comparative and interdisciplinary perspective.
- Advanced training of doctoral candidates by Ph. D. holders, within small teams and by the Post Graduate School of the Philosophische Fakultät.
- Invitation of external researchers working on relevant subjects.
- Establishment of new and furtherance of already existing networks in Germany and abroad, including scientific and didactic institutions, as well as media.
- Backup of results, using the ‚eScience-Forschungsumgebung BW-eSci(T)‘

The Collaborative Research Centre started its work by holding a two day workshop for all project managers and Ph. D. holders, who were already involved in the process of preparation. Subject was the thematic and structural orientation, as well as the integration of newly recruited scientific staff, including Ph. D. candidates. Conceptual work started with the subsequent two-week research colloquium. In January 2014 a first conference, including a group of international external scientists, the project divisions A, B and C provided an overview over recent developments and the current state of research in relevant topics, related to the concept of RESOURCECULTURES. During the first eighteen months the individual projects, besides their project related work, will analyse the research history of RESOURCECULTURES in their respective disciplines. This analysis will form the base of discussion during an international symposium, scheduled for end of 2014, beginning of 2015. Its results will be used to further develop the concept of resources used in the Collaborative Research Centre. By this, the conceptual base, developed during the application phase, will be expanded to serve as a fundament for the further research of the centre. The constant discussion of problems and issues within the Collaborative Research Centre, as well as with guest lecturers and external colleagues, will help to continuously revise and sharpen the underlying concept. Based on this a second conference will focus on the sector divisions. Besides the project managers the Ph. D. holders play a crucial role for interdisciplinary discussion. In small workgroups (called Mini-Kolleg) they will discuss problems specifically related to individual disciplines, as well as conceptual questions with the doctoral candidates, thus assuming an important part in their training. All results, but specifically those related to conceptual developing, will be topic of the second international symposium at the beginning of the fourth year of funding.

1.2.3 Positioning of the Collaborative Research Centre in a wider Subject Area

a. Related Fields of Research

Collaborative Research Centre 1070 RESOURCECULTURES distinctly stands out from current research. First, because of the wide variety of participating disciplines. Second, because of its innovative approach to the problem of resources and its conceptual orientation on the interdependencies of resource use, social practices and symbolic or normative orders. Third, because of its focus on tangible as well as on intangible resources. Few universities in Germany can offer a similar variety of cultural scientific disciplines in the fields of archaeology, classical and ancient studies, history and ethnology. Compared with Collaborative Research Centre 1070 RESOURCECULTURES, no university or research institution is studying resources with a similarly wide thematic focus or with similar cultural

scientific depth. The problem of exploitation, processing and trade of natural raw-materials traditionally is subject of archaeological and historical studies. But only one other scientific location in Germany focusses distinctly on resources: the Ruhr University at Bochum, in cooperation with the Deutsches Bergbaumuseum and their research focus 'Archaeology of economy and raw-materials'. But here all research activities are clearly oriented towards the analysis of tangible evidence and specific mining areas. A multidisciplinary approach, not directly linked to specific raw-materials and with a wide cultural-scientific perspective, as is planned in Tübingen with its variety of disciplines, cannot be realised there or elsewhere in Germany. Even the Leibniz Graduate School 'Raw-Materials, innovation, technology of ancient cultures', recently installed in Bochum, only focusses on minerals as raw-materials, especially metals. The spectrum of disciplines here is much narrower, mainly restricted to archaeology and mining history. The valuation of objects in their social environment is studied by the archaeological and ethnological Research Training Group 'Value and Equivalence' at the Goethe University Frankfurt. In contrast to the Collaborative Research Centre 1070 RESOURCECULTURES this Research Training Group is mainly concerned with the identification and transformation of values, mainly related to tangible objects, especially media of payment and exchange. Another Research Training Group, 'Formen von Prestige in Kulturen des Altertums' at the Ludwig-Maximilians University Munich, also studies valuations, specifically those related to personal reputation and social acceptance of behaviour. Here, resources are included as one kind of abstract component with remote relation to the generation of prestige, but actually are a topic of minor concern. Considering the extensive methodological approach of Collaborative Research Centre 1070 RESOURCECULTURES, only one group of projects can be compared: the Graduate School 'Human Development in Landscapes' at Kiel that has been working very successfully on a different subject: the archaeology of landscapes.

An exhibition with the title ‚LandschaftRessourcen, united several DFG funded Collaborative Research Centres, research groups etc., concerned with specific resources like water, soil, renewable raw-materials and landscapes. Here Agricultural Sciences and Ethnology almost exclusively concentrated on resources as natural raw-materials and the change of their use, especially during crisis- or borderline situations, with the aim to find practical solutions for problems like erosion and depletion. With respect to the problems studied, as well as with their methodological approach, they are clearly different from Collaborative Research Centre 1070 RESOURCECULTURES.

b. Interdisciplinarity in the Collaborative Research Centre

Ancient and Classical studies are one of the traditional fields of excellence of Tübingen University, made manifest by a large number of distinguished research projects of a wide chronological and geographical range and based on a variety of methodological and theoretical approaches. As demonstrated by the excellence initiatives funded by the DFG, a close cooperation and coordination of research approaches is advisable. Thus, the Collaborative Research Centre RESOURCECULTURES defines itself as an initiative to create a research association of archaeological and historical disciplines, with the shared aim to study issues in economic-, social- and cultural history, but through the cooperation with Ethnology and Economic History, targeting also important current issues. Besides the research, trying to reach specific scientific results, the stated intention is to closely integrate the cultural scientific disciplines. The spatial and organisational proximity, existing at Tübingen, provides excellent conditions for this.

The cooperation between the participating disciplines has, especially in the UK and the US (David/Kramer 2001), and to a lesser degree in France (Pétrequin 1984) as well, a long tradition. Especially in the United States Ethnology/Anthropology and Archaeology are hardly separated, and institutionalised together as (*Cultural-*) *Anthropology*. For more than two decades now in Germany as well, a considerable number of studies (e. g. Wotzka 1993; Müller 1994; Benz 2000; Knopf 2002; Neipert 2006, Kümmel 2009) and newly established research groups have proven how successful a cooperation between these disciplines can be. Since several years the Research Training Group 1576 'Value and Equivalence' in Frankfurt or the Graduate School 'Human Development in Landscapes' in Kiel successfully study topics, of interest to both, archaeologists and ethnologists. Working together, researchers from both disciplines need to contemplate thoroughly their respective sources (e. g. closed assemblages in households) and methods of interpretation (e. g. contextual interpretation), in order to determine the potential and the limits of scientific cooperation. Garrow and Shove demonstrated (2007, 130) with an experiment the fact that archaeologists and sociologists pursue

their rather similar goals by very different ways, because they work with different materials and concepts. The respective analytic methods and capabilities have to be thoroughly understood during an extended process, creating the positive side-effect of making researchers aware of the limitations of their own discipline.

A praxeological approach, including the consideration of actors, social relations and behaviour for the interpretation of tangible culture, serves to create close links between the disciplines. Amongst others, this approach can be exemplified by Hilgert's (2010) method of 'text-anthropology'. With regard to ethnological and archaeological studies of resources, especially the results of Hans-Peter Hahn (2005, 2007) about tangible culture and perception, and use and meaning of 'things' are ground-breaking, because he argues for a 'linking of different perspectives' (Hahn 2005, 163). The (re-) production of systems of meaning and social orders by the production of tangible culture was particularly addressed by Hardenberg (2011) in an ethnographic study about the production of chariots and statues of deities in the eastern parts of India.

Generally the need for more and new analogies, usable for the interpretation of archaeological finds cannot be questioned (Gramsch 1996, 2000), be they derived from ethnographical data, or from texts. They serve as thought-provoking impulses, show up possible meanings and forms of use and provide 'medium-range models' in socio-cultural contexts. This may be used to develop *cautionary tales* (specific examples warning about biased interpretation), but systematic, cross-culture concepts as well. Ethnology/Anthropology on the other hand, can profit from the awareness of the depth of time, studied by archaeology, as well as from its methods of describing and interpreting of tangible culture. As a result of a cooperation with archaeology, Ethnology/Anthropology intensifies its analysis of tangible objects and their embedment into historical processes.

Collaborative Research Centre 1070 will continue the well-established cooperation of Ethnology/Anthropology and Archaeology, while addressing prevailing questions, analysing its potential and developing it, particularly in the fields of conceptualisation and the establishing of a concept of resources, reaching beyond customary discourses and integrating new approaches of cultural sciences.

c. Customary Discourses: Resources as a part of nature

The terms 'resource' and 'resources' are a subject of public and scientific discussion only since recent decades. While resources were discussed in a restricted sense as natural raw-materials, environmental sustainability and the use of renewable resources became a central demand. There had been an awareness of the unbalanced geographical distribution of resources before, but generally they were regarded as being available in abundance. The only question seemed, how to discover and exploit new reservoirs or to make old ones profitable again by the use of new technology and higher financial investment (Faucheux/Noël 2001).

The process of globalisation made problems concerning resources, already recognised during the 1960ies and 1970ies, even more obvious and more urgent than before. Conflicts and even wars about natural resources, their control and distribution (Elwert 1997), reached a global geo-politic dimension (Klare 2001). 'Natural resources' are no longer seen exclusively as a basis for prosperity and growth, but as a potential source for traumatic events for communities and societies as well. It was realised that globalisation and industrialisation, leading to depletion, an increase of pollution by toxic waste and emissions, endanger even renewable resources, such as plants and animals and basic factors of environment, like air, water and soil (Altner et al. 2009).

Without doubt, the awareness of these pressing issues also influenced the development of ideas and hypotheses in the scientific disciplines, participating in the Collaborative Research Centre. A major trend in Ethnology/anthropology is the study of common-pool resources, in connection with questions of sustainability (e. g. Ostrom/Gardner/Walker 1994; Haller 2010). Research about the history of economics focus on resources, here defined as input for production. Besides ecology-oriented economic studies of resources, especially education came into the focus as a central resource in the New Growth Economics-Theory (Romer 1986). Ecological problems or dearth and abundance were also discussed in ancient studies (e. g. Halstead 1989) and in Ethnology/Anthropology (e. g. Sahlins 1972). The term 'resource' was used in the discussion of specific research interests (Della Casa 2002; Bartelheim 2009), but many recent studies still show the use of the popular definition of resources in archaeology, especially in economy oriented papers (Urban 2002), when functionalistic approaches

were demanded for the archaeology of economics (Stöllner 2002, 77), or as crop resources in an inventory of cultivated plants in antiquity (Hondelmann 2002).

In Prehistory, Classical Archaeology and Ancient Studies, as well as in the disciplines studying the ancient Near East and Egypt, resources usually have been seen as elements in environments of specific natural conditions. Discussions of raw-materials, animals and plants, but also environmental factors, regularly played an important part in explanations of cultural change, such as innovation, emergence of social hierarchies, migrations and acculturations. Environmental preconditions within the 'fertile crescent, for example, specifically the occurrence of certain species of plants and animals, are seen as a trigger for the 'Neolithic Revolution', that is the emergence of settlements and the domestication of plants and animals (Childe 1936; Benz 2000, 4-6).

Already in the early concepts of the 'Asian Mode of Production' or 'Oriental Despotism' in social history by Marx, Engels, Weber and Wittvogel the emergence of centralistic governments and bureaucratic-despotic systems was explained by the need for an economy based on irrigation (for an overview see: Reich 2004, 494-510). The importance of water and soil for agriculture is still emphasised in the recent research about the ancient Near East and Egypt (e. g. Renger 1991; Bonneau 1993), even if the simplistic, rather claimed than proven, relationship between control of resources and systems of rule is disproved. The traditional, direct causally determined connection between irrigation and the emergence of the Old Kingdom in Egypt has been questioned pretty early (Schenkel 1978; Endesfelder 1979).

In Classical Studies the coastal area of the Mediterranean, allowing the cultivation of wine and olive trees, is seen as the basis of life style or even civilization in the Mediterranean societies. This assumed interrelationship provided the background for concepts of the expansion of the Greek polis-system (Kirsten 1956). The chapters about 'environments' and 'ecology' in most recent handbooks (Hughes 2006; Foxhall 2006; Sallares 2007) are still based on this, just as paragraphs in studies of regionally limited research or summaries to specific regions and imagined ethnically uniform cultural landscapes (e. g. for Lydia: Roosevelt 2009, 33-58).

Arable land and metal deposits also play an important role in studies of large scale 1st millennium BC migrations, usually labelled 'colonization', even if this role is controversially discussed. This goes for the Western Mediterranean (d'Agostino 2006; Carter 2006) as well as for the Black Sea (Treister 1999; Braund 2007; Tsetskhladze 2008). In research about the younger periods of prehistory as well ores and metals are part of explanations for cultural and social change since quite a long time. Because of this, a considerable number of studies about deposits, technological aspects of exploitation, production and distribution in the Mediterranean (see e. g. Domergue 2008) and in Europe (e. g. Bartelheim 2007; Stöllner 1999, 9) can be found.

On a more general level, since the first works on settlement archaeology by geographers like Robert Gradmann or archaeologists such as Ernst Wahle at the beginning of the twentieth century, prehistoric archaeology emphasised the role of natural environment. The history of settlement according to its 'natural background' was in the focus of research. 'Phenomena, related to aspects of settlement and culture' were envisaged as 'coming into being under natural preconditions' (Wahle 1920, 53). But also finding out about the ways, how humans increasingly managed to make nature subservient was of interest for early research (ibid. 4-5). Nature deterministic approaches stayed pre-dominant even until the second half of the twentieth century (e. g. Sielmann 1971 discussing the Neolithic settlement of south-western Germany), in which geographical conditions largely prescribed the potential subsistence activities and by this the economy of farming settlers (ibid. 127). The increased employment of natural scientific methods in archaeology (Eggert 2006, 11-27) served to bring organic and inorganic raw-materials even more into the focus of archaeological research. Still it stayed a distinction of settlement archaeological studies, that besides ecological conditions (possibly affected by producing humans), cultural factors always were discussed, even if they usually were used only to explain anomalous locations for settlements or other, 'non-fitting' findings, such as 'irrational decisions, caused by ways of thinking, typical for primitive people' (Kossack 1995, 31; 44). More generally religion or trade could be seen as responsible (Gringmuth-Dallmer/Leciejewicz 2002, 408; Posluschny 2002, 119-120). Still it was allowed for a development of humans from 'passive to increasingly active beings' (Jahnkuhn 1977, 193).

The discussion of archaeological theory in 'New Archaeology' since the 1960ies was dominated by ecological perspectives. This was based mainly on ethnological/anthropological concepts (themselves

frequently taken over from philosophy), such as Julian Stewards *Cultural Ecology* (Eggert 1978, 86), in which the adaptation of culture to the locally predetermined environment was seen as a central factor (ibid. 87). 'Natural resources' were a basic part of concepts like 'micro-environment' (ibid. 94). These ecological approaches were combined with deterministic and possibilistic modes of thought and the concept of rationally calculating human beings (for critique see Bernbeck 1997, 142).

Analysing studies of the appearance of metallurgy, the development of the theoretical background is easily to be traced: In his early works Colin Renfrew regarded the raw-material metal, and the availability of technologies to work with it, as the reason for cultural change (Kienlin 1999, 44). Andrew Sherratt, in contrast, postulated an incentive to exploit raw-materials, such as metal ores, especially for groups living in marginal regions, where subsistence is problematic (ibid. 53), thus seeing economic and social structure as a prerequisite for the emergence of metallurgy. Within this context the catchphrase 'Metals make the world go round' was used as title (Pare 2000).

Despite their differences, works like these often were based on the implicit assumption that 'natural resources' are a trigger for cultural and social processes and a decisive factor for economy, technology and society and, as a result also for population density, prestige and religion. Close functional or causal ties between use and possession of resources and the control of routes of distribution and communication on one hand, and cultural historic developments, such as the emergence of elites, general social up- or downswings and political conflicts on the other were commonly postulated.

Older studies in Ethnology/Anthropology used to give theoretic reasons for approaches like this. The formalistic *Economic Anthropology* for example is based on the principle of 'allocation of scarce resources' (LeClair 1962, 1188). According to this, economy is focussed on human activities connected to resources, their limits and potentials, as well as resulting forms of organisation to meet human demands (Firth 1958, 63). A direct influence of resources on the size of populations, and by this on social development, is assumed by *Culture Ecology* (Steward 1955), connecting an obvious evolutionism with a strict parting of nature and culture (Helms 1978). Later (Neo-) Marxist, cultural-materialistic and cultural-ecologic approaches within Ethnology/Anthropology (e. g. Godelier 1978; Harris 1979; Lee 1968; Rappaport 1979; Suttles 1968; Vayda 1961) also continued the dichotomy of nature and culture (for an overview see: Wilk/Cliggett 2007, 54–72; 104–107; Gregory 1982, 24–28). The concept of resources as a part of nature displayed here, still dominates the discussions of resources mentioned above, whether in public or in historical, economical, natural or cultural sciences and thus influences our perception of history, as well as of current issues. This was demonstrated by a 'virtual debate' on the internet forum 'H-SOZ-U-KULT', in preparation of the meeting Deutscher Historikertag in the year 2012 in Mainz, titled: 'Ressourcen-Konflikte' (<http://hsozkult.geschichte.hu-berlin.de/index.asp?pn=texte&id=1889>). Again, the focus was on the tangible (material) character of resources and 'functional logics' of the steps within the history of a specific material. Besides the analytic potential of the term resource, the aspect of narrativity and a wide variety of methodological approaches were given attention to. The participants in the discussion concordantly agreed that resources cannot be seen as 'naturally granted', but instead always are integrated into social behaviour and a product of certain preconditions, framework requirements and interests. This refers already to the discourses covered in the next chapter. No agreement could be reached on a succinct definition of the term, a homogenous methodical approach or an exact identification of fields of research.

d. Recent Discourses: Resources in Cultural Contexts

On the basis of new developments and insights in cultural sciences the Collaborative Research Centre RESOURCECULTURES applies a comprehensive concept of resources, covering the cultural dimension in the identification and use of resources. Basic for this is the assumption that materials and objects, environment, as well as relations and institutions of human society, together with concepts of ideas and stocks of knowledge only turn into resources for groups, communities and societies, in specific historic situations and because of specific cultural believes, thus triggering specific social processes. Consequently resources have to be viewed as an integral part of cultural constructs or culture specific symbolic and normative orders.

In a deliberate shift away from *Processual Archaeology* and its orientation on quantitative methods and scientific explanations (Veit 1998, 42–44; Krauß 2006, 7), Anglo-American theoretic archaeology since the 1980ies started to focus on symbolic and conceptual aspects. While the archaeology of ancient Greece rather perceives the raw-materials as the reason for the migrations of the 'Great Greek Colonisation' (d'Agostino 2006), history in contrast also explains the search for resources with social demands in Greece itself. The search for metals for example by the need to produce always more and more complex weapons and armour (Murray 1995, 91). In accordance with developments in Classical Archaeology (e. g. Hölscher 1992; for an overview see: Schweizer 2000), the approaches of *Symbolic Archaeology* (Hodder 1982) proved to be promising for younger or historical periods in archaeology as well (Veit et al. 2003). Generally the focus of archaeological research shifted from a purely economic and functional level to aspects like ideas, concepts and values. Landscape Archaeology as well tried to integrate these approaches and to formulate a broad variety of questions to be answered by the data (e. g. Lang 2003). Only by this, the distinction between 'physical' and 'perceived' landscape became possible, or respectively a definition of landscape as a dynamic space with social, cultural and ecological relevance (see: <http://www.uni-kiel.de/landscapes/>). Considering that recently in prehistoric archaeology traffic routes were treated as resources (Primas 2009, 200), that hoards were understood as a kind of social practice, being interpreted using the results of ethnologic/anthropologic studies (Hansen 2005, 226), or that resource use and environment related behaviour of peasants is studied using extensive comparisons of archaeological and ethnographic sources, then it becomes obvious that in this discipline also new ways of thinking are employed.

In recent years the structuralist approaches, as used for example by *Symbolic Archaeology*, seem to decline in comparison with concepts based on the theory of practice (Shanks/Hodder 1995, 17). To understand the phenomenon of cultural change, it has been suggested to give up the static concept of culture and instead to understand culture as a dynamic historical process (Gramsch 2009, 14), within which a wide variety of social-, economic- and cultural-'identities' interact. This is supposed to shift the focus towards the 'mechanisms inside a society', towards 'communicative action within and between societies', towards the multi-faceted identities and social actors and generally towards a dynamic concept of culture (ibid. 16-17). Very similar concepts are used in the critical discussion related to the research about the large scale 'colonisation' migrations of Greeks and Phoenicians during the first millennium BC, as seen from a post-colonial perspective (Dietler/López-Ruiz 2009; Lyons 2002; van Dommelen 1997; van Dommelen/Knapp 2010). Here archaeology is called upon to reconstruct actions, as well as 'their related meaning for economy, ideology, social structure and the like' (Gramsch 2009, 19), by using archaeological sources. For the problem of resources it is crucial to understand, that actions not necessarily respond to 'objective pressure' (for example economic misery), but instead to a 'situation perceived as such' (ibid.). Thus, it can be observed that the recent development of theoretical background in archaeology and in cultural and social sciences are converging.

The approach used by the Collaborative Research Centre RESOURCECULTURES, on a general level, corresponds to the concepts of cultural sciences, as modernised by the cultural turn (Bachmann-Medick 2006). Culture is seen as a space of multi-faceted practices of construction and interpretation, related to meanings and values in specific social contexts. Similar contemplations about resources can be found in ethnography (Kramer 1986) and anthropogeography (Weingarten 2005). Still it must be stressed that in all the different disciplines there is no (or not yet) explicit discussion about 'resources'. Instead the quoted examples are integral parts of macro-theories dealing with issues like cultural change or the archaeology or ethnology of economy.

New perspectives on the problem of resources in Ethnology/Anthropology are represented by cognitive approaches of Cultural Ecology (e. g. Berzborn 2006; Bollig 2006; Casimir 2008; Laube 2007) and especially of *Landscape Ecology* (see Luig/von Oppen 1997; Little 2007). Here the focus is mainly on historical processes, local beliefs, culture specific ways of use and individual use of resources in crisis situations (e. g. Bollig 2006, 7). In contrast, Schlee (2004; 2006) employs an extended definition of resources, including for example people or power (Schlee 2006, 102). Research is centred on the question of how formation processes of groups or of concepts of the 'enemy' work within the context of a strife for resources. Thus, the discussion shifts from objects (resources) to subjects, meaning beings and their social identities (Schlee 2006, 141). A similar conception can be

found in the studies of Feyissa/Hoehne (2008), defining borders in the region of the Horn of Africa as *opportunity structures*, used by groups or individuals, because they provide four different resources: economic, political, identity and legality (or status) resources. This expansion of the formerly only economically defined category 'resource' can be found already in the works of Bourdieu (1987; 1989), using the concept of capital to describe and explain social or symbolic orders (1979, 356). Following this, various trends of different disciplines are now using terms like 'social' or 'cultural resources' (e. g. Baumert/Maaz 2006; Haug 2007; Klocke 2004).

A number of the ethnological studies mentioned above display four approaches, sometimes in combination with each other:

- they define resources mainly as 'natural raw-materials', while studying the interrelationships between humans and environment,
- they use approaches focussing on actors and are concerned with individual strategies related to tangible as well as intangible resources,
- following Bourdieu, they transfer economic logic onto symbolic orders,
- they explicitly categorise resources according to different fields of practice (economy, politics, social relations and others).

To begin with, the Collaborative Research Centre RESOURCECULTURES will initially concentrate to research the question how something can turn into a resource, because of culture specific concepts and norms of individual societies, and which cultural beliefs, religious concepts and social practices shape the use of these resources. This takes up a result of recent ethnological/anthropological studies about tangible culture, summarised by Hans-Peter Hahn as follows: 'Objects have a meaning, because they are linked to certain practices; they achieve new meaning through new practices. Cultural life always is a combination of objects and people using these objects' (Hahn 2005, 138). In contrast to these studies the Collaborative Research Centre RESOURCECULTURES will also consider intangible resources, such as recollection, knowledge or relationships, the value of which only result from culture-specific patterns of social interaction as well.

Generally, the specific definition of resources in the Collaborative Research Centre answers to criticism stating that:

- the popular, economically biased idea of resources used in public and in scientific context, is based on specific western concepts of nature, progress, science and technology,
- it is a concept derived from the ideology of *homo oeconomicus* and a euro-centric perspective,
- it can be seen as a construct of an industrialised world (e. g. Dahlberg/ Bennett 1986, 12).

In Ethnology/Anthropology approaches considering the interconnection between socio-cultural systems and economic actions have been developed from early on. Thus already during the mid-twentieth century the so-called substantivists (e. g. Polanyi 1944; Dalton 1961) pointed out the *embeddedness* of economic transactions into social context. This approach was considerably expanded by Gudeman (1986; 2001). His *Culture Economics* acts on the assumption that economic transactions can only be understood within their context of cultural beliefs of specific societies and their social practices. Thus, the concept of *Base*, as developed by Gudeman (2005, 97), can be used for an expanded view on resources.

The definition of resources used in the Collaborative Research Centre RESOURCECULTURES is based on studies, questioning the universal existence of a distinctive 'economic sphere'. Already in 1976 Sahlins criticised Marxist and neo-liberal models, pointing out that resources have to be seen connected to culturally constituted, practical interests (1976, 207). Bird-David (1990; 1992a; 1992b) went even further in her interpretation of economic activities in the context of *Root Metaphors*. Here metaphors are those central cultural beliefs or scenarios that are of very general character, and thus can be applied to wide variety of social situations (e. g. the perception of 'nature as parent') as patterns creating order and meaning. The studies of Ingold (1996; 2000) as well question on a general level the ontological distinction between environment and resources on one hand, and culture and potential of use on the other. Following these thoughts, the Collaborative Research Centre will not try to postulate a strict separation between modern and pre-modern perception, but instead will give room to the cultural diversity, when it comes to the definition of resources. This means that even in a world of globalised transactions, exchanged goods and commodities, as well as the relationships on which

they are based, are used and evaluated within a framework of specific cultural systems (e. g. Sahlins 1999a, xv) and local societies (Gudeman 2001, 1-2).

The idea that resources - their meaning, use and effect - can only be understood in their relation to social practice and social and normative systems of specific societies, connects the historical and archaeological disciplines participating in the Collaborative Research Centre with Ethnology/Anthropology and Economic History. The studies of Polanyi started a discussion about economic systems, influencing not only the research about the ancient Near East and Ancient Egypt (Pfälzner 2006; Müller-Wollermann 1985), but recently, as a starting point, were summarised for Prehistory as well (Eggert 2010). In classical studies a parallel discussion, linked to the ideas of Moses I. Finlay, is held since decades (starting with Finlay 1954 until most recently Scheidel/Morris/Saller 2007).

e. Fields of Research

Further elaboration and the establishing of the cultural-scientific concept of resources drafted above, is one of the most significant aims of the Collaborative Research Centre. Furthermore, as stated, it pursues three additional aims: 1) perception of social and political long-term developments; 2) understanding of processes of spatial development and identity creation and 3) comprehension of the symbolic dimensions of resources. To reach these aims, based on the current state of research, three fields of research were identified:

Developments

'Developments' denominates the interrelationships between resource use on one hand and processes of cultural, social and political change on the other. This is not seen as a kind of linear evolution, but instead, as a dynamic in the structure of societies and their cultural expressions, without a prescribed direction. The focus is on historical situations in which basic materials and natural products could be assessed locally, regionally or continuously by established traffic routes.

Structural change always has been a central topic for research in archaeologies and historical sciences, as well as in the Modern Cultural Sciences, with close collaborations between those disciplines established since decades. Because of its sources especially Ethnology/Anthropology, in contrast to historical sciences and archaeology, rarely has the chance to trace processes of change over longer periods of time (Sahlins 1985; 2000, 415-470). But because of the direct contact with the protagonists, modern cultural sciences can comprehend aspects of socio-cultural systems and processes that are invisible for the archaeologies, because of the huge distance in time and the resulting severe filtering of the data available for analysis. Research about periods with few or no written records, especially those studied by Prehistory, from beginning on relied on the use of analogies, with two different sources for the comparisons used: the need for models other than modern western cultures was realized from early on and thus they were taken mainly from historical sciences (usually those studying Europe or the Mediterranean) on one hand, and Modern Cultural Sciences, namely Ethnology/Anthropology, on the other. Classical and Near Eastern Studies and Egyptology, as disciplines working in times and regions with a high quantity of written sources, for a long time used to rely on the information taken from contemporary internal sources when it came to describe social conditions and their transformations. During recent decades in these disciplines as well, a tendency became visible to take over the models for socio-political systems or processes of social change developed and used by Ethnology/Anthropology.

The key note in descriptions of societies and their change by Ancient and Classical Studies and Archaeology often is the identification of hierarchies and their evolution. Regularly typologies of social systems, developed by Ethnology/Anthropology since the 1960ies and 70ies (especially Sahlins 1960; Service 1962; 1975; Fried 1967; Friedman 1982) were applied. Although they found wide acceptance, there was criticism as well. On one hand it was questioned whether these types, defined by field research in specific regions, were really representative on a larger scale. Also classificatory vagueness in their typological distinction made it difficult to apply them for other societies (e. g. Eggert 2007, 268-269). On the other hand it seems highly problematic to arrange such types, rather representing snap-shots of societies, into a linear evolution, such as from 'big man society' to 'chiefdoms' and ultimately to 'states' (Yoffee 1993, 63-72). The applicability of models, derived from

the study of social and political conditions in recent periods, for the analysis of prehistoric societies is equally controversial. Here it is possible to construct models, based on long-term observations of processes, but still the question remains whether it makes sense to apply results about one period to another (Eggert 2007, 255-257). The basic tendency, explicitly or implicitly discernible in most research, to assume a diachronic linear evolution of social structures, beginning with egalitarian conditions and leading to complex organised hierarchies, recently has been more and more challenged by alternative perspectives. Thus, for example K. Kristiansen identified wavelike fluctuations in the formation of hierarchical structures during European Bronze- and Iron Ages (Kristiansen 1998), while A. Zimmermann recognised cyclical movements in the cultural development of prehistoric societies (Zimmermann 2012). The conference proceedings 'Beyond Elites' recently published by T. Kienlin and A. Zimmermann (2012) is a plea to replace the fixation on vertical structures with an expanded view on the diversity of social relations in ancient societies.

The study of social structures is closely connected to the study of the basic principles of their emergence, perpetuation and changing. Archaeologies and historical sciences often focus on the economic preconditions for the functioning of social groups. Particularly resource use, and especially that of raw-materials, agricultural potential or systems of exchange, is frequently considered when the emergence and perpetuation of hierarchies are discussed. A special role is often assigned to metal, because it is highly valued and sought-after and its exploitation, production and distribution requires processes of high organisational and technological complexity. There is a wide-spread opinion that these processes necessarily required centralised structures of organisation, thus stimulating the emergence of hierarchies (for an overview see Bartelheim 2007; Kienlin 2010). The intensification of far-reaching exchange networks, while simultaneously limiting access to them, reinforced the tendency towards the formation of vertical social structures within the participating societies (Kristiansen/Larsson 2005; Hansen/Müller 2011). Similar results were achieved, amongst others, by studies analysing the interrelation between the intensification of agriculture with socio-political processes. While up to now no significant social hierarchies could be identified within the context of the process of the emergence of sedentary lifestyle and the beginning of agriculture in the Old World (e. g. Lüning 2005; 2011), they are postulated for the subsequent periods (e. g. Müller 2012). This includes the creation of technologically advanced irrigation systems with a complex organisation in the river valleys of arid environments. This in turn is frequently seen as the fundament for the emergence of systems of rule with deep vertical hierarchies, such as states and empires like the Near Eastern, Egyptian or Indus civilisations, or the state systems on the western coast of Southern America (termed 'hydraulic societies' by Wittfogel 1981). But also alternative models for the reconstruction of the organisation of resource use are discussed, especially those using collective alliances, for example based on kinship or vicinity, not necessarily requiring centralistic structures of command. Thus, it becomes clear that the complexity of societies cannot be understood through the analysis of power struggle alone, but other motivations for social interaction, aside from prestige and individual influence have to be considered (Rowlands 1971; Roscoe 2000; Kohring/Wynne-Jones 2007; Kienlin 2012).

As we have seen, inequalities in the access to resources are widely held responsible for social and cultural change by disciplines studying ancient and modern cultures. The Collaborative Research Centre RESOURCECULTURES in contrast uses its concept of resources as a multilateral category for analysis, working on the basic assumption that on one hand societies change and develop because of their specific resource use, while on the other hand social processes influence use of resources.

Movements

'Movements' describes the fact that human beings – individuals as well as parts of larger groups or even societies as a whole – will not, or not exclusively, stay in one place or one region, but instead change their location temporarily, for longer periods of time or permanently. The term 'movement', deliberately chosen by the Collaborative Research Centre because of its more neutral character, is usually replaced, paraphrased or, less frequently, combined, for example as 'migratory movement' (Böhme 1996). 'Migration' usually refers to a long lasting relocation of individuals, families or groups (Steuer 2002, 119). Most frequently it describes a situation in which large groups 'get on the move' out of a wide variety of reasons, covering large distances (compare the term 'Migration Period' in Early Medieval History: Springer 2006). 'Colonisation' is normally used for purposeful processes, targeting to the appropriation and use of land in distant regions. 'Mobility' on one hand means circular movements returning to their starting point, as well as small scale, close distance 'movements' on the other. Often

for the 'movements' of individuals ('individual mobility') this term is used. Besides the spatial 'mobility', a social 'mobility' exists as well (Steuer 2002, 118).

Spatial 'allotment', 'development' and 'appropriation', or more general 'settlement' refer in a neutral sense to more or less purposeful actions, connect to the relocation of people from one place to another (e. g. Gringmuth-Dallmer 2005). The German term 'Landnahme' especially is in use for medieval processes of settlement (Prien 2005, 10).

For 'movements of people in pre-industrial societies' generally an 'ecological push' is assumed (Prien 2005, 15) and for many of these 'movements' archaeological, just as ethnological research is discussing resources as their ultimate cause. Thus, through the course of time and worldwide, a lack of resources, such as arable or otherwise useable land together with overpopulation and depletion, is seen as responsible for spatial development. Economic, technological and social aspects are included as important factors (Prien 2005, 21).

For archaeologies the main methodological problem is verifiability (Burmeister 1996; 2000). Because of the abuse of ethnic interpretation and of postulated 'Germanic migrations' during the time of the 'Third Reich', for some time the study of migration was not well regarded in Germany and other European countries (Andresen 2004). This began to change during the late 1980ies, mainly with Anglo-American approaches (e. g. Rouse 1986), and even more during the 1990ies, witnessing a considerable number of studies dealing with related questions (Chapman/Hamerow 1997; also see *Archäologische Informationen* 19, 1996). Recent and most recent publications of Prehistory (Andresen 2004; Prien 2005; Krenn-Leeb et al. 2006; Moiné 2009), but of Classical Archaeology (Olshausen/Sonnabend 2006) and Medieval Studies (Borgolte et al. 2012) as well, show an unbroken interest in the subject. Other major research topics as well, have connections to problems of mobility and migration (Scharl 2004).

A new access for the study of movements derives from natural sciences. The analysis of isotopes in bones for instance may point towards a mobility of individuals or their origin from a region different from the place of their burial (Tütken/Knipper/Alt 2008, with bibliography). Publications of this rapidly increasing field of research mainly focus on the term 'mobility' (for an exception compare Price et al. 2004). Here, aspects of tangible resources, such as land, food and the like are less important than social resources, such as systems of marriage and alliance. In some cases even seasonal mobility (e. g. in pastoralist economies) can be identified (Knipper 2011), thus again bringing natural resources to the fore. A recent research project of the University of Leipzig also centred on mobility of individuals and groups, working with isotope analyses and archaeological designations of origin of objects from burials (Koch 2007b; 2010). A systematic examination of written sources from the 1st millennium BC in the Mediterranean, as a part of this project, pointed out the fact that the mobility of whole groups is more frequent, while individuals travelling alone seem to be the exception (Koch 2007b; 2009).

Research about the Mediterranean during the classical periods centres on the concept of 'colonisation'. Based on the foundation of 'colonies', known through historical traditions and proven by written documents, the newly founded cities are since long time subject to archaeological research, trying to identify connections with the cities of origin (Graham 1964; Ehrhardt 1988; Boardman 1999; Aubet 2001; Tiverios 2008, 1–154). However, the discussions of recent years started to question the very term and concept of colonisation (see van Dommelen 2011; as a summary: Tsetskhladze 2006, xxiii-lxxxiii). For these 'Mediterranean Movements' as well, reasons are mainly sought for in connection to the need and demand for resources. Some other approaches rather stress social factors (e. g. Bernstein 2004) or a combination of those with aspects of resource demand (see d'Agostino 2006, 201–237).

Relating to the concepts of migration, colonisation, mobility and others, discussed above under the heading 'movements', for the Collaborative Research Centre RESOURCECULTURES, using a definition of resource, stressing the assignment of cultural value and social enactment, the frequently occurring aspects of communication, acculturation, conflict and integration and identity are of special importance for the research in the individual projects. Expansions, invasions and war-like events as well have to be considered (Häusler 1996), because such processes in the context of movements frequently are connected to resources. The analysis of the role of resources in 'Movements' focusses primarily on resource related reasons for development, 'colonisation' and the like, and as well on the socio-cultural

conditions and processes within the researched societies. The valuation of resources or the assignment of symbolic value to them, frequently play a crucial role in creating a demand for resources, not locally available. Movements related to resources, thus may provide a starting point for a variety of studies of the economic, social, symbolic and identity related role of resources, within the context of different kinds of spatial development and settlement processes, as well as of studies of resource related identities and the socio-cultural development of the societies in question.

Valuations

Relating to resources, terms like 'value', 'valuation', 'evaluation' or 'adding value' are frequently defined in a purely economic sense. In a summarising overview Jochen Henning (2007, 84–87) explained that the term 'value' in economical sciences is either seen in the form of results or positions, achieved by people striving for them, or as a denomination for a scale in the exchange of goods. A distinction is made between (subjective) *usage value* and (objective) *exchange values*. According to the different approaches, value can be expressed as demand, price or assumed services, functions or attributes (Henning 2007, 87). Value adding from corporate perspective thus is 'the process of creating surplus by working on something', from the buyer's perspective as 'increase of well-being (...) by the consummation of products and services' (Henning 2007, 84, 87–88). In this sense a resource is, what enables value adding, such as tangible or intangible assets.

This definition, used by economic sciences, is tailored for specific economic fields of action and differs considerably from the use of the term in other disciplines, as can be seen when comparing with Krobath's (2009) survey of concepts and discourses about values in Philosophy, Psychology and Sociology. For the Collaborative Research Centre, viewing resources mainly under the aspect of social phenomena, the definitions and solutions of Sociology, Psychology and Ethnology/Anthropology are of importance. Two different approaches, of major influence in these disciplines, can be identified:

The first one goes back on the works of Clyde Kluckhohn (1951, 395), perceiving value as the 'desirable' and thus as a means of orientation for individual action. Influenced by this, Rokeach (1973) stressed the aspect of creation of meaning through values, defining them as: 'enduring beliefs that a specific mode of conduct is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence' (1973, 5). On this approach the studies of Schwartz and Bilsky (1987) were based, and it was the starting point for an attempt to develop a model of universally valid values (Schwartz 1994). Following this approach, in sociology and psychology, questions about the origin of values, their relation to self and personality, about the motivation for action by values and about the transformation of values (Hitlin/Pliavin 2004) were examined. Regarding these issues the Collaborative Research Centre will have to discuss in which way – perhaps even cross culturally – the search for and the use of resources were motivated by specific values and whether changes within RESOURCECULTURES are reflections of a change of values.

The implicit universality of this approach led to vivid discussions during the 1970ies and 80ies, fuelled for example by questions about rationality (Wilson 1979, Hollis/Lukes 1982, Geertz 1984). In this debate, those arguing from a culture-relativistic point of view provided a second approach for the understanding of values, influenced by the work of American Cultural Anthropology, especially by Franz Boas, Alfred Kroeber and Ralph Linton. While universalists argued for a worldwide existing core of cross-cultural values, that are developing differently because of different ecological factors and historical processes, the culture-relativists postulated the uniqueness of cultural sets of values (Heintz 2009, 5). Following this idea, a value is understood as something super-individual and learnt, integrating cultural elements into a meaningful whole (e. g. Kroeber 1952). By this, value in the sense of significance serves to create relations or systemic connections. This thought can also be detected in the Theory of Values by Luis Dumont, writing that values in non-modern societies 'express the order of relations that permeate the local ideas of the cosmos, which includes the society' (Berger et al. 2010, xvii). Starting from this understanding of values, symbolic and structuralist Ethnology/Anthropology (e. g. Platenkamp 2003) and Archaeology (e. g. Hodder 1982) analyse systems of interrelations, observable for example in ritual actions, architecture settlements or the arrangement of burial gifts. The research training group 'Value and Equivalence' at the Goethe University of Frankfurt is based on a similar concept of values. In this reasoning, resources are seen as means, expressing values, related to social hierarchies or evaluated systems.

More recent theoretical research, for example by Robbins (2009), combines these approaches, pointing out that holistic systems of values are especially important in societies, dominated by a central value, while ideas about the decision-making of individuals become relevant in situations of conflict between different values, during which humans tend to consciously reflect on their values. This approach is useful for studying questions of the development of resources in foreign regions when, for example because of colonisation and foreign rule, different systems of values or valuations of resources might clash.

The definition of value within the Collaborative Research Centre will mainly be based on more recent approaches, considering processes of evaluation, devaluation or re-evaluation of objects in the expanded sense of tangible resources. Already during the 1970ies Michael Thompson developed the so-called rubbish theory (2003), explaining that during processes of re-evaluation objects frequently go through a phase of complete devaluation. A major contribution to this debate was made by Igor Kopytoff (1986, 73-77), proposing that, by the use of discourses and practices, such as processes of production and exchange, humans turn objects into something unique and provide them with a biography. Similarly the ethnologist Karl-Heinz Kohl could demonstrate, how the value of objects depends on their cultural and historical context and thus is subject to change. An example for this is provided by Kollewe (2007), analysing the way how prehistoric, anthropomorphic artefacts change their value and how this is influenced by social change. For the study of resources this means that it has to be considered which value is assigned to a specific resource, how this value is dependent on time and context, and possibly changing. Thus, following Bender/Traves (2012, 10) the concept of value could be seen as a 'social-cultural construct closely related to processes of meaning making'.

Up to now, the term 'adding' value' is not frequently used in cultural sciences. More recent studies about cultural heritage use it to describe the symbolic, economic and emotional dimension of these resources. Bendix/Hemme/Tauschek (2007, 10-11) include in their understanding of 'adding value' the nobilitation of cultural heritage, that is its symbolic enhancement because of the distinction, as well as the related, often disguised, economic increase, depending on the increase of public interest.

The Collaborative Research Centre will use the concept of 'adding value' by analysing how values serve to turn something into a resource for social relations, units and identities. Here the question is, which practices or kinds of organisation emerge, to appropriate these valuables, to convince others of their value and to make use of it. This puts certain forms of representation, such as myths, legends, historical writing or translations, into the fore, through which claims are legitimised, knowledge is preserved or memorised and change is made possible. These kinds of adding value themselves can turn into a resource for the community.

f. Section Subjects

During the preparatory work for the Collaborative Research Centre it became clear that for the participating disciplines three subjects are of major concern and most promising for interdisciplinary collaboration. These are 1) resource curse, 2) conflicts about resources and 3) sacralisation of resources.

Resource Curse

The concept of a curse of resources derived from a debate in Economic Science about the effects of so-called 'natural resources'. In this discipline the term describes raw-materials taken from nature (such as oil, gas, ores, precious metals and others) and used to gain economic profit. Based on this view during recent decades the idea of a curse of 'natural resources', as an explanation for the lack of economic success of countries with an abundance of resources, became very popular in economic scientific debate (Sachs/Warner 1995; Auty 1993). The empirically based data, retrieved since the 1960ies, is somewhat astonishing, because the existence of many 'natural resources' had been considered as a guarantee for economic growth. Recently Alexeev and Conrad (2009) pointed out the necessity of long-term observations, for studies of this kind, because the lack of those will lead to the classification of countries with a lot of raw-materials as 'rich' countries with little room for further growth (because of convergence). To explain these, at first instance surprising results, several mechanisms were suggested. For example Sachs and Warner observed the fact that countries, exporting lots of resources, develop currency exchange rates, making the production of processed goods in the

country seem unprofitable. Instead such goods are increasingly imported. Further problems result in the political framework of economy (instability, high level of debt, dictatorial regimes) together with a neglect of education (Gylfason 2001).

Some of these factors (as for example the mechanisms of currency exchange) are existing only in recent times, but not in older periods of history. The hypothesis of Prebisch (1950), assuming that an increase of income leads to a faster increase of prices for processed goods than for raw-materials, is irrelevant for early periods, because in the long run, the increase of income is not high. The validity of the hypothesis as such was recently questioned by Deffeyes (2005). But at least three of the processes, suggested as causal for the curse of resources, can serve to develop fresh and innovative aspects if applied to long-term observations:

- In some crucial cases, the exploitation of raw-materials lead to socio-cultural dynamics, creating huge inequalities within the society. Why is this the case? Mining metal-ores for example, will need only a rather small number of personnel, while creating a considerable production value. Other possibilities to earn a living (e. g. in agriculture or trade) require a much higher number of people, who in turn have to be fed and housed at the least, to gain equivalent profit. The proprietor of the mine can keep a higher percentage of the production value for himself or distribute it to his family or his close allies, while the rest of the population will not profit much, if any at all. Today, for example, the ruling classes of oil exporting countries are fabulously rich. Likewise South Africa, with all its mining, displays worldwide maxima of inequality, a situation surprisingly not changed by the end of Apartheid. Such enormous inequalities of income and possessions seem to emerge less frequently, when other possibilities of earning are pursued, even if some exceptions are known (Gylfason/Zoega 2002).
- A second mechanism, identified as working in the 20. Century, also could serve as an explanation for dynamics in previous centuries: the existence of 'natural resources' seems to distract potentially enterprising individuals from commercial and productive activity, because their exploitation allows to gain riches with less risk and effort. New kinds of knowledge and comprehensive education are neglected, leading to a lack of know-how for further development. 15th century Spain for example was much wealthier than the Netherlands or England. The establishment of colonies in Latin America poured tremendous profits, derived from the exploitation of resources, into the motherland. Consequently, potentially enterprising Spanish individuals rather tried their luck in the colonies, instead of developing Spain by the founding of new manufactures and employing innovative technology. The Dutch and English in contrast, did exactly this and the economy of their countries soon left Spain behind. Naturally this is a rather simplistic description, but still it seems worthwhile to analyse similar processes for the changing fates of ancient cultures in the Near East, the Mediterranean and Northern Europe according to this aspect.
- The same is true for a third factor, the so-called military bias. Collier (2007) recently emphasised the importance of the occurrence of oil and minerals for an increasing likelihood of civil wars. Brunnschweiler and Bulte (2009), on the other hand demonstrated that conflicts in turn lead to an intensified exploitation of resources. In countries rich in raw-materials, as well as in the neighbouring countries, it can be observed that a comparatively large proportion of higher educated individuals join the military, while military spending is comparably high. In such a situation, looting raw-materials by military action is the fastest way to gain status and wealth. The most gifted individuals thus, are not available for the developing of a sustainable economic fundament for countries and empires, especially because the potential booty eventually will become inaccessible. A recent study analysed the Roman Empire from this perspective (Baten/Priwitzer 2012).

Still the 'resource curse' has to be contrasted with the blessings of resources – especially a large number of older studies in economic history emphasise for example the occurrence of coal in England as a major stimulus for the Industrial Revolution, because it facilitated the use of innovative technology (the steam engine etc.). Research will profit from tracing these ambivalences in specific case studies.

The expanded, socio-cultural definition of resources used in the Collaborative Research Centre, exceeds the idea of 'natural resources' considerably. Based on this, it has to be asked which other

kinds of resources might be 'cursed' as well, creating similar dynamics. Certain religious practises may be used as resources to stabilise societies. Would it be possible that they can turn into curses as well, once they succeeded in creating common identities, but the background is changing and religious ideas cannot be modified accordingly? In this respect knowledge, expertise and know-how are likewise of importance. Hodler (2006) emphasised that the effect of the curse usually leads to conflict through institutional knowledge or the lack thereof.

The target of this section division is, to utilise this concept of economic sciences for the cultural sciences, by applying an expanded definition of resources.

Conflicts about Resources

A significant approach to resources is to study them within the context of conflicts, rule and social inequality. Already early theoretical work about conflicts considered resources as a cause for conflicts, wars or revolutions. In Marxist theory the inequalities in the distribution of means of production and power leads to class struggle. The debate on political theory as well considers the competition about resources as a cause for national and international conflicts, especially if resources are located near borders (Diehl/Goertz 2000). Ethnology/Anthropology also studies the issue of desire for and scarcity of tangible, as well as intangible resources. Elwert (1995) for example argues that the conflict in Somalia is brought about by the access to water, claimed by different groups (Elwert 1997). Schlee (2004) instead, objects to the concept of 'ecological determinism' and, using the example of the Rendille and Somalis, demonstrates how the use of the same available resource in one region can lead to completely different mechanisms of maximising, but also to completely different social structures and mechanisms of inclusion and exclusion, without an outbreak of conflicts about resources. Another important idea in Ethnology/Anthropology is the assumption that conflicts themselves are a kind of resource, because they have the potential to destroy social relations, but also can, paradoxically, contribute to social cohesion, by supporting the emergence of comprehensive institutions during the process of conflict resolution (Eckert 2004, 7-8). The hypothesis is that there is a mutual interrelation between a specific resourceculture and the conflicts, characteristic for it. Thus, the social order influences which kinds of resources can trigger conflicts and how these conflicts are settled. Reversely, these conflicts and the resulting action intended to settle them, affect the social units and lead to social change.

The interrelation between conflicts, environmental preservation movement, sustainability and resource preservation is influencing the debate in social sciences since the 1960ies. Developments of recent decades, like demographic change, environmental destruction and global warming, are seen as endangering the sustainable management of 'natural resources' (Low/Heinen 1993; Pimentel et. al 1997). Water, air, but stable environmental conditions as well, are understood as being of interest on national and international level. This important debate was started by the anthropologist Eric Wolf (1972), by drawing the attention to the relationship between ownership conditions and ecosystem and the distribution of resources in relation to global structures and forms of governance. *Political ecology*, dealing with the analysis of conflicts, resulting from economic, ecologic and cultural differences, since then developed, according to Escobar (2010), in distinct phases. It is a characteristic for these phases that they show a different understanding of nature, environment and thus, resources. The first phase, according to Escobar is characterised by a positivist and essentialist view of nature, while the political dimensions of power and exploitation are little considered. The second phase follows a constructivist approach, perceiving nature and resources as a social construct. The third phase combines the constructivist and essentialist positions. Besides their culturally constructed existence, nature and environment do have a tangible aspect that cannot be denied or overlooked. Additionally the third phase is characterised by an openness towards 'different ontologies'. This implies that not only scientific interpretations, but all the different emic perceptions and points of view as well, should be examined and considered (Escobar 2008; Santos 2006). This approach goes along with the one demanded for the Collaborative Research Centre, in which the interpretation, assumed nature and function of resources is not constituted by academic interpretive authority, but instead through empiric and comparative analysis.

Sacralisation of Resources

The topic 'sacralisation' offers a wide field for chronologically and spatially expanded, interdisciplinary studies of resources. As Demsey (2012, 14) wrote: '...the sacred can be usefully employed to cast the

wide net of comparison. Conversely, comparative frameworks can provide multifaceted scenarios from which to explore conceptions and experiences of the sacred in their complexity'. This naturally leads to the question of how 'sacred' can be defined and what is meant by 'sacralisation'.

Generally two different approaches can be distinguished (Lynch 2012), providing different answers for the question of how to define 'sacred': on one hand ontological, and on the other hand cultural-sociological theories. The first are mainly based on the works of Otto (1923) and Eliade (1959). Otto saw the sacred as a 'mysterium tremendum', a kind of universal mysterious experience, connected to emotions like fascination, awe, but also fear. For Eliade as well, the sacred is of a universal, ontological reality, deriving from the orientation of 'homo religiosus' towards the transcendent. According to Max Weber (1919), who stated a demystification of belief systems, going along with the rational, capitalistic system, Eliade assumes that modern times are characterised by de-sacralising and a turn towards the profane. This ontological approach of Otto and Eliade was sharply criticised, especially for its implicit universalism and the neglect of political and social context (Lynch 2012, 13).

The second approach, coming from cultural sociology, goes back to Emile Durkheim (1976 [1915]), who connects the experience of the sacred, as in the effervescence of ritual, to the experience of the social, as in being a member of a tribe. In Durkheim's view, everything has the potential to be sacred, not only ghosts or gods, but simple tangible objects or elements of landscape as well: '...a rock, a tree, a spring, a pebble, a piece of wood, a house, in a word, anything can be sacred.' (1976 [1915], 37). The sacred, according to Durkheim, has a cultural dimension and is an expression of specific social orders and processes. This approach was adopted and further developed, amongst others, by Shils (1975), Bellah (1992) and Alexander (2003). In this cultural-sociological tradition the 'sacred' is connected to social processes and assumed to be culturally constructed and dependent on specific historic contexts.

Both theories, the ontological as well as the cultural-sociological, agree in a strict differentiation of sacred and profane, representing domains, shielded from each other by proscriptions. In contrast McDannell (1995), in her study of the tangible expressions of the sacred in Christianity, argues that both spheres are constantly overlapping or blending. Likewise, Kamper and Wulf in their introduction to the volume 'Das Heilige – Seine Spur in der Moderne', observed that both fields are inseparably interconnected (1997, 5). Asad (2003, 32) goes even further in his critique of an assumed opposition of sacred and profane. Based on a study of how these terms were defined in Antiquity or the Middle Ages, when they could be of very different meaning, he questioned the universality of the separation. Accordingly, Fitzgerald (2007, 8) states: '...what constitutes 'religion' and what constitutes 'the secular' is highly contested and requires historiographical and ethnographic deconstruction.' Recent studies of sacredness (e. g. Hamm/Herbers/Stein-Kecks 2007) thus are especially focussed on differing concepts, explanations and justifications, on tensions in the understanding of the sacred and specific developments, such as desacralizing and sacralising or intensification or decrease of sacredness. This sacredness can be identified in persons (Astell 2000) and likewise in specific spaces or periods (Barton 2003). What Karl-Heinz Kohl (2003) found out for objects in general, is in this respect also true for resources: depending on their use and cultural background resources may be categorised in a multitude of ways, they may be seen as sacred, prestigious or useful and they can fall into different categories simultaneously.

Considering this, the sacred has a number of aspects in common with resources, as defined for the Collaborative Research Centre. First, both have tangible, as well as intangible dimensions, including for example objects, just as landscapes or specific knowledge. Second, the sacred, as well as resources within the Collaborative Research Centre, is seen in close connection to social relations, units or identities. Third, a comparable approach is used for the definition: the sacred, just as resources, is understood as being socio-culturally constructed and historically changeable. Summarising, it could be said that sacredness is a dimension of resources, created and used by the handling of these resources. This approach leads the view especially on *processes*, *strategies*, *media* and *practices* of sacralisation. Processes of sacralisation often are perceived as an expression of political and social developments, or as a strategic means to enforce political aims (Demsey 2012). In 2010 an interdisciplinary conference 'Sacralised Politics and Political Religion. Changing Configurations of Religion and Politics in the 19th and 20th Centuries' was held at Münster University, discussing these mutually interrelated processes. Analysing the media of sacralisation especially brings the creation and use of sacred objects into the fore. Based on theories of cognition (e. g.

Fauconnier/Turner 2002; Hutchins 2005), assuming that aspects of the sacred are made tangible to ease their understanding, Jessen for example argues (2010, 378) that movable altars have the function 'to stabilize and concretise, in the real physical world, the theological concepts which the clergy utilize during mass'. Besides tangible representations, referred to as 'Speichergedächtnis' (reservoir memory) by Aleida Assmann (2006, 58), the media of sacralisation also include a range of symbolic practices, collectively called 'Funktionsgedächtnis' (function memory). Differing forms of memorizing, such as myths, legends, epics or sacred texts are included into this category, just as a wide variety of ritual practices. These media of sacralisation are the subject of a new, DFG funded research unit 'Sakralität und Sakralisierung', (<http://www.sakralitaet.uni-erlangen.de>), analysing for example the cult of dragon kings in China or floor mosaics of Early Christian churches.

The discussion above demonstrates that comparisons of processes, strategies, media and practices of sacralisation are a productive field for interdisciplinary exploration. Based on the working definition of resources for the Collaborative Research Centre, it should be particularly examined under which conditions they can turn to be sacred, which political effects are triggered by the sacralisation, how resources achieve the status of being sacred and what kinds of actions and practices are related to this. Does something turn to be sacred because it is a resource for the community, or does something turn into a resource because it is considered to be sacred? Does sacralisation of resources automatically lead to an emergence of hierarchies and social inequalities for the access to resources?

1.2.4 Conceptive Integration of the Collaborative Research Centre at its Location

The Collaborative Research Centre RESOURCECULTURES is based on interdisciplinary work, focussing on the archaeologies and historical sciences. The conceptual centre thus, is located within the archaeological and historical disciplines at Tübingen University – Institute for Prehistory and Medieval Archaeology (Philosophische bzw. Mathematisch-Naturwissenschaftliche Fakultät), Institute for Classical Archaeology, Institute for Cultures of the Ancient Near East 'IANES', Philological Seminar (Philosophische Fakultät) and Institute for Biblical Archaeology (Evangelisch-Theologische Fakultät). There is a very close cooperation with the department for Ethnology at the Asien-Orient-Institute (Philosophische Fakultät), benefitting from the adjacency of the institutes inside the castle of Tübingen. In addition colleagues from historical sciences (Philosophische Fakultät) and economical sciences (Wirtschafts- und Sozialwissenschaftliche Fakultät) were invited to join the Centre.

The Collaborative Research Centre is intended to make the most efficient use of the potential of archaeological, historical and cultural sciences in Tübingen, which can be considered as exceptional, compared on national and even international level, by an extensive, innovative common research project. The capacities of all disciplines working in the targeted field are concentrated in the Collaborative Research Centre. The integrating effects of this cooperation in research and teaching will set the fundamentals for further inter- and transdisciplinary academic work. Besides the close cooperation within the more numerous groups of archaeologies and historical sciences (including Scientific Archaeology), Modern Cultural Sciences and Economic Sciences, especially the link between the archaeologies and Modern Cultural Sciences is intended to lead to a permanent productive cooperation, serving as a model for similar projects.

Conditions for a research and teaching cooperation like the Collaborative Research Centre RESOURCECULTURES in Tübingen are outstanding. This is true not only for the excellence of staff, but for infrastructure, like computing facilities, libraries, labs and collections as well. During the process of newly appointing academic staff for some of the participating institutes in recent years, all of these were brought to meet the highest international standards. All the project managers are internationally well-known and respected researchers. Research focusses, related to the projects of the Collaborative Research Centre are already existing in the participating institutes. In a number of archaeological projects conducted by Tübingen University (Palaeolithic sites in South Africa, Syria, France and the Swabian Alb, settlement excavations at Qatna, tel Burak, on Cyprus, at Troy, Cossyra [Pantelleria], Varna, the Heidengraben, on the Limburg, the Baar, as well as others) the use of resources in connection to the specific sites is already in the centre of interest. The same is true for the manifold areas of research of Tübingen based Archaeometry, Archaeobiology and Geoarchaeology.

The archaeologies and historical sciences in Tübingen – the archaeologies were recently concentrated within the Tübinger Zentrum für Archäologie (TZA) – are present in such a wide variety and employ such a large number of highly qualified staff that makes Tübingen unique in Germany and puts it right on top in international comparison. Archaeologies and historical sciences in Tübingen, besides their collaboration with other social sciences, are distinguished by their close cooperation with natural sciences. This is of high significance for the Collaborative Research Centre, especially in project divisions A and B, where such analyses are an important part of several projects. The Institute for Prehistory and Medieval Archaeology (Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters), a member of both, the Philosophische and Mathematisch-Naturwissenschaftliche Fakultät, has departments, well equipped with staff, labs and collections, for archaeometry, archaeozoology, archaeobotany, physical anthropology and geoarchaeology. The Curt-Engelhorn-Centre for Archaeometry at Mannheim with unique facilities for scientific analysis is also connected to the Collaborative Research Centre, because its scientific director, Prof. Dr. Ernst Pernicka, is one of the project managers. Additionally, archaeologies in Tübingen are in close contact, including affiliated staff, with the Landesamt für Denkmalpflege Baden-Württemberg and the Römisch-Germanisches Zentralmuseum in Mainz, institutions that will share their expertise with the Collaborative Research Centre.

The modern empirical cultural- and social-sciences are represented within the Collaborative Research Centre by Ethnology and Economic History, disciplines studying socio-economic structures with a focus on non-european countries. With their excellent reputation in international academia, the department for Ethnology of the Asien-Orient-Institut and the department for Economic History are an ideal completion for the Collaborative Research Centre. Ethnological studies in Tübingen, for quite a while, are focussing on the interrelationship of profane resources on one hand, and religious and social resources on the other. Economic History at Tübingen successfully applied diachronic analysis to the study of the effects of access to resources for the development of health and growth of populations.

Concerning cooperation in interdisciplinary seminars, colloquia and research collaborations the archaeological, historical and cultural scientific disciplines at Tübingen have rich experience on hand. Amongst others a considerable number of combined advanced classes may serve as an example:

- Near Eastern Archaeology and Prehistory during winter semester 2009/10, with the topic 'Europe, the Eastern Mediterranean and the Near East'.
- Ethnology and Prehistory during winter semester 2010/11, with the topic 'Death and Burial'.
- Classical Archaeology and Prehistory during winter semester 2010/11, with the topic 'Chronology of Iron Age in Central Europe and the Mediterranean'.
- Classical Archaeology and Biblical Archaeology and Prehistory during winter semester 2011/12, with the topic 'Phoenicians and Greek – Early Mariners and Naval Pioneers'.
- Ethnology and Prehistory during winter semester 2012/13, with the topic 'RESOURCECULTURES'.
- Near Eastern Archaeology, Biblical Archaeology, Ancient Near Eastern Philology and Prehistory during winter semester 2012/13, with the topic 'The Sea Peoples'

In addition in winter semester 2011/12 an interdisciplinary series of lectures, supported by all disciplines participating in the Collaborative Research Centre started, interdisciplinary graduate research training was provided by Prehistory and Ethnology (also held in English), examinations are held in common. For the years to come continuously interdisciplinary classes, lecture series and conferences and workshops are scheduled. Furthermore a BA minor programme 'Menschen, Kulturen und Ressourcen' is planned, designed to complement the major BA programmes for all participating disciplines. It is devised to give an introduction to the subject and to demonstrate the potential of academic collaboration for undergraduates. Besides the employment of student assistants, students will be included in scientific fieldwork related to the projects of the Collaborative Research Centre. For Ph.D. candidates there will be training and supervision, specially structured and designed for the purposes of preparing doctoral theses.

Some previously established research collaborations at Tübingen University, such as the most successful Collaborative Research Centre 19 'Tübinger Atlas des Vorderen Orients'(1969-1993), Collaborative Research Centre 275 'Klimagekoppelte Prozesse in meso- und känozoischen Geoökosystemen' (1994–2001) or the graduate research training group 442 'Anatolien und seine

Nachbarn' (1998-2004) had related research interests. Currently the Post-graduate schools 'Römischer und neuzeitlicher Bergbau in Wiesloch (Baden) aus lagerstättenkundlicher, historischer und archäologischer Sicht' and 'Die Symbole der Toten: Archäologische, naturwissenschaftliche und religionsgeschichtliche Untersuchungen zu sepulkralen und memorialen Kontexten im Alten Orient' are working successfully. In addition, in the course of several extensive projects, interdisciplinary resource related research was conducted in a way to provide groundwork for the Collaborative Research Centre. Here, especially the long-term excavations, funded by the DFG, at Troy, Qatna and Varna have to be listed. These projects analysed the development of regional centres, related to the use of local resources, as well as to their location close to major trade routes, important for the exchange and distribution of raw-materials and produced goods. The deposits of mineral tangible resources in Turkey, the Caucasus, the Aegean, South-Eastern-Europe, the Alps, Southern and Central Germany and the Iberian peninsula, their exploitation, production and distribution, together with all the cultural historical implications, are the focus of work at the Curt-Engelhorn-Zentrum für Archäometrie (Mannheim), closely connected to Tübingen University. The relation between resource use and cultural development also is subject of research in the long-term project 'The role of Culture in Early Expansions of Humans', conducted by the Heidelberger Akademie der Wissenschaften in collaboration with the Senckenberg Research Institute since 2008. For the modern cultural sciences project collaborations, such as the priority programme 'Kulturraum Karakorum', funded by the DFG from 1989 to 2001 and studying the relation between people, culture and environment in the region around the Karakorum Highway have to be named, as well as the network of competences 'Crossroads Asia: Konflikt – Migration – Entwicklung' about resource exploitation and development dynamics along the north- south corridor at the Iranian-Afghan-Pakistan border, sponsored by the BMBF since 2011.

The recently established Collaborative Research Centre 923 'Bedrohte Ordnungen' ('Threatened Order – Societies under Stress'), because of its comparable approach and the fact that some researchers work at both centres, offers the chance for fruitful academic exchange. On the other hand both research centres are clearly distinguished from each other, since 923 analyses the social and intellectual mechanisms of handling situations of conflict, and how these situations develop. Conflicts about resources and their use are only considered marginally, the analysed situations of conflict instead are mainly based on religious, ideological, social and political disputes, as well as on the handling of natural disasters or epidemics, some of them with global effects. Thus Collaborative Research Centre 923 focusses much more on the situations of crises themselves, while 1070 RESOURCECULTURES will concentrate on the use and valuation of resources.

During the first two phases of funding, the study of cultural and socio-political implications of resource use will deliberately exclude the analysis of modern industrial societies, in order to concentrate on approaching the ways of the understanding of resources in antiquity. To do so, the institutes for Egyptology and for Empirical Cultural Studies, whose capacities for research are presently used up by other projects, will be included. According to the results achieved, during the third phase of funding a collaboration, including appropriate projects, with Economic Science, Sociology and/or Economic Geography at Tübingen is possible, that will complementarily address current problems in industrialised countries. Thus, it will be possible to clarify the specifics of ancient or Non-European societies, by contrasting them to modern, industrialised societies and, on the other hand to provide a historic perspective on problems still affecting us today.

1.2.5 National and International Co-operations and Networking

An intensive networking of research on national and international level is characteristic for the Collaborative Research Centre 1070. Already during the preparatory phase substantial contacts to most respected colleagues, researching similar topics, in Germany and abroad were established. From this group of academics the members of an advisory board are recruited, scientifically accompanying and consulting the projects of the Collaborative Research Centre. The following persons accepted to contribute: Anders Andrén (University of Stockholm), Philippe della Casa (University of Zürich), Stephen Gudeman (University of Minnesota), Richard Lee (University of Toronto), Markus Nüsse (University of Heidelberg), Richard Steckel (Ohio State University), Norman Yoffee (University of Michigan). Members of this group, but also many others from Germany and

abroad, will be invited for lectures and participation at workshops and conferences. Furthermore, to promote international networking, many projects will continuously present themselves on conferences, organised by international professional associations (such as the European Association of Archaeologists, the Union Internationale des Sciences Préhistoriques et Protohistoriques, the World Archaeological Congress, World Congress of Soil Science and others).

Several co-operations with already existing research centres, focussing on resources, could be established. This includes: the cluster of excellence TOPOI (FU/HU Berlin), analysing the use and conceptualising of space, the Leibniz Graduate School 'Raw Materials, Innovation, Technology of Ancient Cultures (RITaK)' (Deutsches Bergbau-Museum/Ruhr-Universität Bochum), studying raw-materials and their role in cultural and social change in antiquity and the network of competences 'Crossroads Asia', concerned with conflict, migration and development, subjects also central for the Collaborative Research Centre RESOURCECULTURES. They are intended to organise joint conferences and colloquia, as well as mutual guest lectures. Furthermore collaborations, intended to facilitate the access to scientific infrastructure and the intensification of networking, with several significant scientific institutes abroad were established. Amongst them are the German Archaeological Institutes in Madrid and Rome and the Eurasia Department in Berlin, the Institute for material Culture of the Eremitage at St. Petersburg, the Soprintendenza dei beni culturali di Sicilia in Trapani, the École française d'Extrême-Orient in Paris, as well as the Instituto Português do Património Arquitectónico in Faro. Also research institutions not connected to universities, especially the Landesamt für Denkmalpflege Baden-Württemberg, the Römisch-Germanisches Zentralmuseum Mainz, the Senckenberg research institute in Frankfurt and the Max Planck Institute for the Study of Religious and Ethnic Diversity in Göttingen are included in the collaboration on specific projects, as well as on a general level. Furthermore, there are plans to cooperate with the 'Haus der Geschichte Baden-Württemberg', in order to make sure that research results of the Collaborative Research Centre will be included into school curricula. This flow of information will be mainly the task of the Public relations project: Resources and the Public.

Bibliography:

- d'Agostino 2006: B. d'Agostino, The First Greeks in Italy. In: G. R. Tsetschladze (Hrsg.), Greek Colonisation I. An Account of Greek Colonies and Other Settlements Overseas (Leiden 2006) 201–237.
- Alexander 2003: J. Alexander, The Meanings of Social Life. A Cultural Sociology (New York 2003).
- Alexeev/Conrad 2009: M. Alexeev/R. Conrad, 2009, The Elusive Curse of Oil. Review of Economics and Statistics 91,3, 2009, 586–598.
- Altner et al. 2009: G. Altner/H. Leitschuh/G. Michelsen/U. E. Simonis/E. U. von Weizsäcker (Hrsg.), Umwälzung der Erde. Konflikte um Ressourcen. Jahrbuch Ökologie 2010 (Stuttgart 2009).
- Andresen 2004: M. Andresen, Studien zur Geschichte und Methodik der archäologischen Migrationsforschung. Internationale Hochschulschriften 373 (Münster 2004).
- Asad 2003: T. Asad, Formations of the Secular. Christianity, Islam Modernity (Stanford 2003).
- Assmann 2006: A. Assmann, Der lange Schatten der Vergangenheit. Erinnerungskultur und Geschichtspolitik (München 2006).
- Astell 2000: A. W. Astell (Hrsg.), Lay Sanctity, Medieval and Modern (Notre Dame, Indiana 2000).
- Aubet 2001: M. E. Aubet, The Phoenicians and the West. Politics, Colonies, and Trade (Cambridge 2001).
- Auty 1993: R. M. Auty, Sustaining Development in Mineral Economies. The Resource Curse Thesis (London/New York 1993).
- Bachmann-Medick 2006: D. Bachmann-Medick, Cultural Turns. Neuorientierungen in den Kulturwissenschaften (Hamburg 2006).
- Barnard/Spencers 1996: A. Barnard/J. Spencers, Encyclopedia of Social and Cultural Anthropology (London 1996).
- Bartelheim 2007: M. Bartelheim, Die Rolle der Metallurgie in vorgeschichtlichen Gesellschaften. Sozioökonomische und kulturhistorische Aspekte der Ressourcennutzung. Forschungen zur Archäometrie und Altertumswissenschaft 2 (Rahden 2007).
- Bartelheim 2009: M. Bartelheim, Die Nutzung mineralischer Ressourcen in der Bronzezeit Mittel- und Südosteuropas. In: Bartelheim/Stäuble (Hrsg.), Die wirtschaftlichen Grundlagen der Bronzezeit Europas. Forschungen zur Archäometrie und Altertumswissenschaft 4 (Rahden 2009) 177–188.
- Bartelheim/Stäuble 2009: M. Bartelheim/H. Stäuble (Hrsg.), Die wirtschaftlichen Grundlagen der Bronzezeit Europas. Forschungen zur Archäometrie und Altertumswissenschaft 4 (Rahden 2009).

- Balmuth 2001: M. S. Balmuth (Hrsg.), *Hacksilber to Coinage. New Insights into the Moneterian History of the Near East and Greece. A Collection of Eight Papers Presented at the 99th Annual Meeting of the Archaeological Institute of America, New York. Numismatic Studies 24* (New York 2001).
- Barsch/Bürger 1996: H. Barsch/K. Bürger, *Naturressourcen der Erde und ihre Nutzung* (Gotha 1996).
- Barton 2003: S. C. Bellah (Hrsg.), *Holiness Past and Present* (London/New York 2003).
- Baten/Priwitzer 2012: J. Baten/S. Priwitzer, *Social and Intertemporal Differences of Basic Literacy and Numeracy in the Ancient Roman Economy. Tübingen Working Paper 2012.*
- Baumert/Maaz 2006: J. Baumert/K. Maaz, *Das theoretische und methodische Konzept von PISA zur Erfassung sozialer und kultureller Ressourcen der Herkunftsfamilie. Internationale und nationale Rahmenkonzeption.* In: J. Baumert/P. Stanat/R. Watermann (Hrsg.), *Herkunftsbedingte Disparitäten im Bildungswesen. Differenzielle Bildungsprozesse und Probleme der Verteilungsgerechtigkeit* (Wiesbaden 2006) 11–29.
- Beer 2012: B. Beer, *Kultur und Ethnizität.* In: B. Beer/H. Fischer (Hrsg.), *Ethnologie. Einführung und Überblick.* (Berlin 2012) 53–74.
- Bellah 1992: R. Bellah, *The Broken Covenant. American Civil Religion in Time of Trial* (Chicago 1992).
- Bender/Taves 2012: C. Bender/A. Taves (Hrsg.), *What Matters? Ethnographies of Value in a Not so Secular Age* (New York 2012).
- Bendix/Hemme/Tauschek 2007: R. Bendix/D. Hemme/M. Tauschek. *Vorwort.* In: R. Bendix/D. Hemme/M. Tauschek (Hrsg.), *Prädikat Heritage. Wertschöpfungen aus kulturellen Ressourcen* (Berlin 2007) 7–17.
- Benz 2000: M. Benz, *Die Neolithisierung im Vorderen Orient. Theorien, archäologische Daten und ein ethnologisches Modell.* *Studies in Early Near Eastern Production, Subsistence, and Environment 7* (Berlin 2000).
- Berger et al. 2010: P. Berger/R. Hardenberg/E. Kattner/M. Prager, *Introduction. The Anthropology of Values.* In: P. Berger/R. Hardenberg/E. Kattner/M. Prager (Hrsg.), *The Anthropology of Values. Essays in Honour of Georg Pfeffer* (Delhi 2010) Xv–xxxiii.
- Bernbeck 1997: R. Bernbeck, *Theorien in der Archäologie* (Tübingen 1997).
- Bernstein 2004: F. Bernstein, *Konflikt und Migration. Studien zu griechischen Fluchtbewegungen im Zeitalter der sogenannten Großen Kolonisation* (St. Katharinen 2004).
- Berzborn 2006: S. Berzborn, *Ziegen und Diamanten. Sicherung des Lebensunterhalts im ländlichen Südafrika* (Berlin 2006).
- Bird-David 1990: N. Bird-David, *The Giving Environment. Another Perspective on the Economic System of Gatherer-Hunters.* *Current Anthropology 31, 2, 1990, 189–196.*
- Bird-David 1992a: N. Bird-David, *Beyond "The Hunting and Gathering Mode of Subsistence". Observations on the Nayaka and other Modern Hunter-Gatherers.* *Man 27, 1, 1992, 19–44.*
- Bird-David 1992b: N. Bird-David, *Beyond "The Original Affluent Society". A Culturalist Reformulation with CA* Comment.* *Current Anthropology 33, 1, 1992, 25–47.*
- Boardman 1999: J. Boardman, *The Greeks Overseas. Their Early Colonies and Trade* (London⁴ 1999).
- Böhme 1996: H. W. Böhme, *Kontinuität und Traditionen bei Wanderungsbewegungen im frühmittelalterlichen Europa vom 1.–6. Jahrhundert.* *Archäologische Informationen 19, 1996, 89–103.*
- Bollig 2006: M. Bollig, *Risk Management in a Hazardous Environment* (New York 2006).
- Bonneau 1993: D. Bonneau, *Le régime administrative de l'eau du Nil dans l'Égypte grecque, romaine et byzantine.* *Probleme der Ägyptologie 8* (Leiden 1993).
- Borgolte et al. 2012: M. Borgolte/J. Dücker/M. Müllerburg/P. Predatsch/B. Schneidmüller, *Europa im Geflecht der Welt. Mittelalterliche Migrationen in globalen Bezügen. Europa im Mittelalter. Abhandlungen und Beiträge zur historischen Komparatistik 20* (Berlin 2012).
- Bourdieu 1979: P. Bourdieu, *Entwurf einer Theorie der Praxis auf der ethnologischen Grundlage der kabyliischen Gesellschaft* (Frankfurt a. M. 1979).
- Bourdieu 1987: P. Bourdieu, *Sozialer Sinn. Kritik der theoretischen Vernunft* (Frankfurt 1987).
- Bourdieu 1989: P. Bourdieu, *Die feinen Unterschiede. Kritik der gesellschaftlichen Urteilskraft* (Frankfurt 1989).
- Bourdieu/Waquant 1992: P. Bourdieu/L. J. D. Waquant, *An Invitation to Reflexive Sociology* (Chicago 1992).
- Brather 2001: S. Brather, *Kulturgruppe und Kulturkreis.* In: H. Beck/D. Geuenich/H. Steuer, *Reallexikon der Germanischen Altertumskunde 17, 442–452.*
- Braund 2007: D. Braund, *Black Sea Grain for Athens? From Herodotus to Demosthenes.* In: V. Gabrielsen/J. Lund (Hrsg.), *The Black Sea in Antiquity. Regional and Interregional Economic Exchanges* (Aarhus 2007) 39–68.
- Brunnschweiler/Bulte 2009: Ch. Brunnschweiler/E. Bulte, *Natural Resources and Violent Conflict. Resource Abundance, Dependence, and the Onset of Civil Wars.* *Oxford Economic Paper 61, 4, October 2009, 651–674.*

- Burmeister 1996: S. Burmeister, Migration und ihre archäologische Nachweisbarkeit. *Archäologische Informationen* 19, 1996, 13–21.
- Burmeister 2000: S. Burmeister, Archaeology and Migration – Approaches to an Archaeological Proof of Migration. *Current Anthropology* 41, 2000, 539–567.
- Carsten 2004: J. Carsten, *After Kinship* (Cambridge 2004).
- Carter 2006: J. C. Carter, *Discovering the Greek Countryside at Metaponto. Jerome Lectures, Twenty-third Series* (Ann Arbor 2006).
- Casimir 2008: M. J. Casimir (Hrsg.), *Culture and the Changing Environment. Uncertainty, Cognition, and Risk Management in Cross-Cultural Perspective* (Oxford 2008).
- Chapman/H. Hamerow 1997: J. Chapman/H. Hamerow, *Migrations and Invasions in Archaeological Explanation. British Archaeological Reports, International Series 664* (London 1997).
- Childe 1936: V. G. Childe, *Man Makes Himself* (London 1936).
- Collier 2007: P. Collier, *The Bottom Billion. Why the Poorest Countries Are Falling Behind and What Can Be Done About It* (Oxford 2007).
- Dahlberg/Bennett 1986: K. A. Dahlberg/J. W. Bennett (Hrsg.), *Natural Resources and People. Conceptual Issues in Interdisciplinary Research* (Boulder/London 1986).
- Dalton 1961: G. Dalton, *Economic Theory and Primitive Society. American Anthropologist* 63, 1961, 1–25.
- David/Kramer 2001: N. David/C. Kramer, *Ethnoarchaeology in Action* (Cambridge 2001).
- Deffeyes 2005: K. Deffeyes, *Beyond Oil. The View from Hubbert's Peak* (New York 2005).
- Della Casa 2002: Ph. Della Casa, *Landschaften, Siedlungen, Ressourcen. Langzeitszenarien menschlicher Aktivität in ausgewählten alpinen Gebieten der Schweiz, Italiens und Frankreichs. Préhistoires 6* (Montagnac 2002).
- Demsey 2012: C. G. Demsey, *Bringing the Sacred Down to Earth. Adventures in Comparative Religion* (Oxford 2012).
- Diehl/Goertz 2000: P. F. Diehl/G. Goertz, *War and Peace in International Rivalry* (Michigan 2000).
- Dietler/López-Ruiz 2009: M. Dietler/C. López-Ruiz (Hrsg.), *Colonial Encounters in Ancient Iberia. Phoenician, Greek and Indigenous Relations* (Chicago 2009).
- Domergue 2008: C. Domergue, *Les mines antiques. La production des métaux aux époques grecque et romaine* (Paris 2008).
- van Dommelen 1997: P. van Dommelen, *Colonial Constructs. Colonialism and Archaeology in the Mediterranean. World Archaeology* 28, 1997, 305–323.
- van Dommelen/Knapp 2010: P. van Dommelen/A. B. Knapp (Hrsg.), *Material Connections in the Ancient Mediterranean. Mobility, Materiality and Identity* (New York 2010).
- Douglas 1987: M. Douglas (Hrsg.), *Constructive Drinking. Perspectives on Drink from Anthropology* (Cambridge 1987).
- Duden 2011: Duden. *Deutsches Universalwörterbuch* (Mannheim/Zürich 2011⁷).
- Durkheim 1912: E. Durkheim, *Les formes élémentaires de la vie religieuse. Le système totémique en Australie* (Paris 1912).
- Durkheim 1976 [1915]: E. Durkheim, *The Elementary Forms of Religious Life* (London 1915 [1976]).
- Eckert 2004: J. Eckert, *Gewalt, Meidung und Verfahren. Zur Konflikttheorie Georg Elwerts*. In: J. M. Eckert (Hrsg.), *Anthropologie der Konflikte. Georg Elwerts konflikttheoretische Thesen in der Diskussion* (Bielefeld 2004) 7–25.
- Edgar/Sedgwick 2002: A. Edgar/P. Sedgwick, *Cultural Theory. The Key Concepts* (London 2002).
- Eggert 1978: M. K. H. Eggert, *Prähistorische Archäologie und Ethnologie. Studien zur amerikanischen New Archaeology. Prähistorische Zeitschrift* 53, 1978, 6–164.
- Eggert 2006: M. K. H. Eggert, *Archäologie. Grundzüge einer Historischen Kulturwissenschaft* (Tübingen/Basel 2006).
- Eggert 2007: M. K. H. Eggert, *Wirtschaft und Gesellschaft im früheisenzeitlichen Mitteleuropa. Überlegungen zum ‚Fürstenphänomen‘. Fundberichte aus Baden-Württemberg* 31, 2007, 255–302.
- Eggert 2008: M. K. H. Eggert, *Prähistorische Archäologie. Konzepte und Methoden* (Tübingen/Basel 2008³).
- Eggert 2010: M. K. H. Eggert, *Früheisenzeitlicher Handel aus kulturanthropologischer Sicht*. In: D. Krause (Hrsg.), *„Fürstensitze“ und Zentralorte der frühen Kelten. Abschlusskolloquium des DFG-Schwerpunktprogramms 1171 in Stuttgart, 12.–15. Oktober 2009. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 120 (Stuttgart 2010) 40–45.
- Ehrhardt 1988: N. Ehrhardt, *Milet und seine Kolonien* (Frankfurt 1988).
- Eliade 1959: M. Eliade, *The Sacred and the Profane* (New York 1959).
- Elwert 1995: G. Elwert, *Gewalt und Märkte*. In: W. Dombrowski/U. Pasero (Hrsg.), *Wissenschaft, Literatur, Katastrophe. Festschrift für Lars Claussen* (Opladen 1995) 120–38.
- Elwert 1997: G. Elwert, *Gewaltmärkte. Beobachtungen zur Zweckrationalität der Gewalt*. In: T. von Trotha (Hrsg.), *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 37, 1997 [Special Issue *Soziologie der Gewalt*] 86–101.

- Endesfelder 1979: E. Endesfelder, Zur Frage der Bewässerung im pharaonischen Ägypten. *Zeitschrift für Ägyptische Sprache* 106, 1979, 37–51.
- Endres 2000: A. Endres, *Umweltökonomie. Lehrbuch* (Stuttgart 2000).
- Endres/Querner 2000: A. Endres/I. Querner, *Die Ökonomie natürlicher Ressourcen* (Stuttgart 2000).
- Escobar 2008: A. Escobar, *Territories of Difference. Place, Movements, Life, Redes* (Durham 2008).
- Escobar 2010: A. Escobar, *Territories of Difference. Place, Movements, Life. Postconstructivist Political Ecologies*. In: M. Redclift/G. Woodgate (Hrsg.), *The International Handbook of Environmental Sociology* (Cheltenham 2010) Chapter 6. 91–105.
- Faucheux/Noël 2001: S. Faucheux/J.-F. Noël, *Ökonomie natürlicher Ressourcen und der Umwelt. Grundlagen der Wirtschaftswissenschaften* 9 (Marburg 2001).
- Fauconnier/Turner 2002: G. Fauconnier/M. Turner, *The Way We Think. Conceptual Blending and the Mind's Hidden Complexities* (New York 2002).
- Feyissa/v. Hoehne 2008: D. Feyissa/M. v. Hoehne, *Resourcing State Borders and Borderlands in the Horn of Africa*. In: Max Planck Institute for Social Anthropology, Working Paper 107 (Halle 2008).
- Finley 1954: M. I. Finley, *The World of Odysseus* (New York 1954).
- Firth 1958: R. Firth, *Work and Wealth of Primitive Communities* (New York 1958).
- Fitzgerald 2007: T. Fitzgerald (Hrsg.), *Religion and the Secular. Historical and Colonial Formations*. (London 2007).
- Foxhall 2006: L. Foxhall, *Environments and Landscapes of Greek Culture*. In: K. H. Kinzl (Hrsg.), *A Companion to the Classical Greek World* (Malden, Ma./Oxford/Carlton, Victoria 2006) 245–280.
- Fried 1967: M. Fried, *The Evolution of Political Society* (New York 1967).
- Friedman 1982: J. Friedman, *Catastrophe and Continuity on Social Evolution*. In: C. Renfrew/M. Rowlands/B. Abott Seagraves (Hrsg.), *Theory and Explanation in Archaeology. The Southampton Conference* (New York 1982) 175–196.
- Fröhlich 2000: S. Fröhlich (Hrsg.), *Kultur. Ein Interdisziplinäres Kolloquium zur Begrifflichkeit*. Halle an der Saale, 18. bis 21. Februar 1999 (Halle 2000).
- Garrow/Shove 2007: D. Garrow/E. Shove, *Artefacts Between Disciplines. The Toothbrush and the Axe*. *Archaeological Dialogues* 14, 2, 2007, 117–131.
- Geertz 1973: C. Geertz, *The Interpretation of Cultures. Selected Essays* (New York 1973).
- Geertz 1984: C. Geertz, *Anti Anti-Relativism*. *American Anthropologist* (NS) 86, 2, 1984, 263–78.
- Germov/Williams 2008: J. Germov/L. Williams, *A Sociology of Food and Nutrition. The Social Appetite* (Oxford 2008).
- Giddens 1984: A. Giddens, *The Constitution of Society. Outline of the Theory of Structuration* (Oxford 1984).
- Godelier 1978: M. Godelier, *Territory and Property in Primitive Society*. *Social Science Information* 17, 3, 1978, 399–426.
- Graham 1964: A. J. Graham, *Colony and Mother City in Ancient Greece* (Manchester 1964).
- Gramsch 1996: A. Gramsch, *Klassifikation, Repräsentation, Invariante – oder: Prähistorie und die Unabdingbarkeit des Vergleichens*. *Ethnographisch-Archäologische Zeitschrift* 37, 1996, 263–267.
- Gramsch 2000: A. Gramsch (Hrsg.), *Vergleichen als archäologische Methode. Analogien in den Archäologien*. *BAR International Series* 825 (London 2000).
- Gramsch 2009: A. Gramsch, *Die Gleichzeitigkeit des Ungleichzeitigen. Überlegungen zum Kulturwandel*. In: A. Zeeb-Lanz (Hrsg.), *Krisen – Kulturwandel – Kontinuitäten. Zum Ende der Bandkeramik in Mitteleuropa. Beiträge der Internationalen Tagung in Herxheim bei Landau, Pfalz, vom 14.–17. 06. 2007*. *Internationale Archäologie, Arbeitsgemeinschaft, Symposium, Tagung, Kongress* 11 (Rahden 2009) 9–26.
- Greenblatt 2002: E. Greenblatt, *Work/Life Balance. Wisdom or Whining*. *Organizational Dynamics* 31, 2, 2002, 177–93.
- Greene/Moore 2010: K. Greene/T. Moore, *Archaeology. An Introduction* (London 2010).
- Gregory 1982: C. A. Gregory, *Gifts and Commodities* (London/New York 1982).
- Gringmuth-Dallmer/Leciejewicz 2002: E. Gringmuth-Dallmer/L. Leciejewicz (Hrsg.), *Forschungen zu Mensch und Umwelt im Odergebiet in ur- und frühgeschichtlicher Zeit. Römisch-Germanische Forschungen* 60 (Mainz 2002).
- Gringmuth-Dallmer 2005: E. Gringmuth-Dallmer, *Vom Naturrisiko zur Naturkatastrophe. Landerschließung und Siedlungsabbruch im Odergebiet*. *Siedlungsforschung* 23, 2005, 101–111.
- Gudeman 1986: S. Gudeman, *Economics as Culture. Models and Metaphors of Livelihood* (London 1986).
- Gudeman 2001: S. Gudeman, *The Anthropology of Economy. Community, Market and Culture* (Oxford 2001).
- Gudeman 2005: S. Gudeman, *Community and Economy. Economy's Base*. In: J. Carrier (Hrsg.), *A Handbook of Economic Anthropology* (Cheltenham 2005) 94–106.
- Gudeman 2012: S. Gudeman, *The Persuasions of Economics*. In: S. Gudeman (Hrsg.), *Economic Persuasions* (New York/Oxford 2012) 62–80.
- Gylfason 2001: Th. Gylfason, *Natural Resources, Education, and Economic Development*. *European Economic Review* 45, 4–6, 2001, 847–59.

- Gylfason/Zoega 2002: Th. Gylfason/G. Zoega, Inequality and Economic Growth. Do Natural Resources Matter? CESinfo Working Paper Number 712, April 2002.
- Hahn 1996: H. P. Hahn, Materielle Kultur und Ethnoarchäologie. Zur Dokumentation materieller Kultur anhand von Untersuchungen in Nord-Togo. *Ethnographisch-Archäologische Zeitschrift* 38, 1996, 459–478.
- Hahn 2005: H.-P. Hahn, *Materielle Kultur. Eine Einführung* (Berlin 2005).
- Hahn 2007: H.-P. Hahn, *Artefacts between Disciplines. The Toothbrush and the Axe. Archaeological Dialogues* 14 (2), 2007, 131–135.
- Haller 2005: D. Haller, *Dtv-Atlas. Ethnologie* (München 2005).
- Haller 2010: T. Haller, *Disputing the Floodplains. Institutional Change and the Politics of Resource Management in African Wetlands. African Social Studies Series 22* (Leiden/Boston 2010).
- Halstead 1989: P. Halstead (Hrsg.), *Bad Year Economics. Cultural Responses to Risk and Uncertainty. New Directions in Archaeology* (Cambridge 1989).
- Hamm/Herbers/Stein-Kecks 2007: B. Hamm/K. Herbers/H. Stein Kecks (Hrsg.), *Sakralität zwischen Antike und Neuzeit. Beiträge zur Hagiographie*, 6 (Stuttgart 2007).
- Hammel 2007: L. Hammel, *Der Kulturbegriff im wissenschaftlichen Diskurs und seine Bedeutung für die Musikpädagogik. Versuch eines Literaturberichts. Zeitschrift für kritische Musikpädagogik*, 2007, 1–27 (Im Internet: <http://home.arcor.de/zfkm/07-hammel1.pdf>).
- Hansen 2005: S. Hansen, *Über bronzezeitliche Horte in Ungarn. Horte als soziale Praxis. In: B. Horejs/ R. Jung/E. Kaiser/B. Teržan (Hrsg.), Interpretationsraum Bronzezeit. Bernhard Hänsel von seinen Schülern gewidmet. Universitätsforschungen zur Prähistorischen Archäologie* 121 (Bonn 2005) 211–230.
- Hansen/Müller 2011: S. Hansen/J. Müller (Hrsg.), *Sozialarchäologische Perspektiven. Gesellschaftlicher Wandel 5000–1500 v. Chr. zwischen Atlantik und Kaukasus. Internationale Tagung 15.–18. Oktober 2007 in Kiel. Archäologie in Eurasien* 24 (Darmstadt 2011).
- Hardenberg 2008: R. Hardenberg, *Die Moso (China) im interkulturellen Vergleich. Grenzen und Möglichkeiten des komparativen Ansatzes in der Ethnologie. Paideuma. Mitteilungen zur Kulturkunde* 54, 2008, 109–127.
- Hardenberg 2011: R. Hardenberg, *The Renewal of Jagannatha's Body. Ritual and Society in Coastal Orissa* (New Delhi 2011).
- Harris 1979: M. Harris, *Cultural Materialism. The Struggle for a Science of Culture* (New York 1979).
- Haug 2007: S. Haug, *Soziales Kapital als Ressource im Kontext von Migration und Integration. In: J. Lüdicke/M. Diewald (Hrsg.), Soziale Netzwerke und soziale Ungleichheit (Wiesbaden 2007)* 85–111.
- Häusler 1996: A. Häusler, *Invasionen aus den nordpontischen Steppen nach Mitteleuropa im Neolithikum und in der Bronzezeit: Realität oder Phantasieprodukt? Archäologische Informationen* 19, 1996, 75–88.
- Heintz 2009: M. Heintz, *Introduction. In: M. Heintz (Hrsg.), The Anthropology of Moralities* (New York/Oxford 2009) 1–19.
- Helms 1978: M. W. Helms, *On Julian Steward and the Nature of Culture. American Ethnologist* 5, 1978, 170–183.
- Henning 2007: J. Henning, *Kooperative Wertschöpfungsmodell in der Asset Management und Wealth Management Industrie. Implikationen für die Wertschöpfung und für die Geschäftsmodelle von Banken. Dissertation der Universität St. Gallen* (Bern/Stuttgart/Wien 2007).
- Hertler/Karl 2006: C. Hertler/S. Karl, *Ressourcen, Ressourcennutzung, Konkurrenz und die Folgen – Ressourcenkonzepte in der Biologie. In: D. Hummel/C. Hertler/C. Janowicz/A. Lux/S. Niemann (Hrsg.), Ressourcen und Bevölkerungsdynamiken – Ausgewählte Konzepte und sozial-ökologische Perspektiven. Demons Working Papers 6* (Frankfurt am Main 2006) 21–44 (http://www.demons-project.de/material/demons_wp6.pdf#page=9).
- Hilgert 2010: M. Hilgert, *'Text-Anthropologie'. Die Erforschung von Materialität und Präsenz des Geschriebenen als hermeneutische Strategie. In: M. Hilgert (Hrsg.), Altorientalistik im 21. Jahrhundert. Selbstverständnis, Herausforderungen, Ziele. Mitteilungen der Deutschen Orient-Gesellschaft* 142, 2010, 85–124.
- Hitlin/Piliavin 2004: S. Hitlin/J. A. Piliavin, *Values. Reviving a Dormant Concept. Annual Review of Sociology* 30, 2004, 359–93.
- Hölscher 1992: T. Hölscher, *Bilderwelt, Formensystem, Lebenskultur. Zur Methode archäologischer Kulturanalyse. Studi italiani di filologia classica* 3. Ser. 10, 1992, 460–484.
- Hodder 1982: I. Hodder (Hrsg.), *Symbolic and Structural Archaeology. New Directions in Archaeology* (Cambridge 1982).
- Hodler 2006: R. Hodler, *The Curse of Natural Resources in Fractionalized Countries. European Economic Review* 50, 6, 2006, 1367–86.
- Hollis/Lukes 1982: M. Hollis/S. Lukes (Hrsg.), *Rationality and Relativism* (Oxford 1982).

- Holy 1987: L. Holy, Introduction. Description, Generalization and Comparison. Two Paradigms. In: L. Holy (Hrsg.), *Comparative Anthropology* (Oxford 1987) 1–21.
- Hondelmann 2002: W. Hondelmann, *Die Kulturpflanzen der griechisch-römischen Welt. Pflanzliche Ressourcen der Antike* (Berlin/Stuttgart 2002).
- Hughes 1994: J. D. Hughes, *Pan's Travail. Environmental Problems of the Ancient Greeks and Romans* (Baltimore 1994).
- Hughes 2006: J. D. Hughes, *The Natural Environment*. In: K. H. Kinzl (Hrsg.), *A Companion to the Classical Greek World* (Malden, Ma./Oxford/Carlton, Victoria 2006) 227–244.
- Hutchins 2005: E. Hutchins, *Material Anchors for Conceptual Blends*. *Journal of Pragmatics* 37, 2005, 1555–1577.
- Ingold 1996: T. Ingold, *The Appropriation of Nature. Essays on Human Ecology and Social Relations* (Manchester 1996).
- Ingold 2000: T. Ingold, *The Perception of the Environment. Essays on Livelihood, Dwelling and Skill* (London/New York 2000).
- Ingold 2007: T. Ingold, *Materials Against Materiality*. *Archaeological Dialogues* 14/1, 2007, 1–16.
- Jaeger et al. 2004: F. Jaeger/B. Liebsch/J. Rösen/J. Straub (Hrsg.), *Handbuch der Kulturwissenschaften. 1. Grundlagen und Schlüsselbegriffe, 2. Paradigmen und Disziplinen, 3. Themen und Tendenzen* (Stuttgart/Weimar 2004).
- Jankuhn 1977: H. Jankuhn, *Einführung in die Siedlungsarchäologie* (Berlin/New York 1977).
- Jessen 2010: M. D. Jessen, *Altars and the Sacred Space. An Investigation Into the Missionary Use of Portable Altars*. In: G. Dharampal-Frick/R. Langer/N. H. Petersen (Hrsg.), *Transfer and Spaces. Ritual Dynamics and the Science of Ritual V.* (Wiesbaden 2010) 373–389.
- Kaelble/Schriewer 2003: H. Kaelble/J. Schriewer (Hrsg.), *Vergleich und Transfer. Komparatistik in den Sozial-, Geschichts- und Kulturwissenschaften* (Frankfurt/New York 2003).
- Kamper/Wulf 1997: D. Kamper/C. Wulf (Hrsg.), *Das Heilige – Seine Spur in der Moderne* (Bodenheim 1997).
- Kertzer 1988: D. Kertzer, *Ritual, Politics and Power* (New Haven u. a. 1988).
- Kienlin 1999: T. Kienlin, *Vom Stein zur Bronze. Zur soziokulturellen Deutung früher Metallurgie in der englischen Theoriediskussion*. *Tübinger Texte. Materialien zur Ur- und Frühgeschichtlichen Archäologie* 2 (Rahden 1999).
- Kienlin 2010: T. L. Kienlin, *Traditions and Transformations. Approaches to Eneolithic, Copper Age, and Bronze Age Metalworking and Society in Eastern Central Europe and the Carpathian Basin*. *British Archaeological Reports International Series* 2184 (Oxford 2010).
- Kienlin 2012: T. Kienlin, *Beyond Elites. An Introduction*. In: T. Kienlin/A. Zimmermann (Hrsg.), *Metals and Societies. Alternatives to Hierarchical Systems in Modelling Social Formations*. *International Conference at the Ruhr-Universität Bochum, Germany, October 22–24, 2009*. *Universitätsforschungen zur Prähistorischen Archäologie* (Bonn 2012) 15–32.
- Kienlin/Zimmermann 2012: T. Kienlin/A. Zimmermann (Hrsg.), *Metals and Societies. Alternatives to Hierarchical Systems in Modelling Social Formations*. *International Conference at the Ruhr-Universität Bochum, Germany, October 22–24, 2009*. *Universitätsforschungen zur Prähistorischen Archäologie* (Bonn 2012) 339–354.
- Kimmig 1964: W. Kimmig, *Seevölkerbewegung und Urnenfelderkultur*. In: R. von Uslar/K.-J. Narr (Hrsg.), *Studien aus Alteuropa. Beihefte Bonner Jahrbücher* 10/1, 1964, 220 ff.
- Kirsten 1956: E. Kirsten, *Die griechische Polis als historisch-geographisches Problem des Mittelmeerraums*. *Colloquium Geographicum* 5 (Bonn 1956).
- Klare 2001: M. T. Klare, *Resource Wars. The New Landscape of Global Conflict* (New York 2001).
- Klocke 2004: A. Klocke, *Soziales Kapital als Ressource für Gesundheit im Jugendalter*. In: M. Jungbauer Gans/P. Kriwy (Hrsg.), *Soziale Benachteiligung und Gesundheit bei Kindern und Jugendlichen* (Wiesbaden 2004) 85–96.
- Kluckhohn 1951: C. Kluckhohn, *Values and Value-Orientations in the Theory of Action*. In: T. Parsons/E. Shils (Hrsg.), *Toward a General Theory of Action* (New York 1951) 388–433.
- Knipper 2011: C. Knipper, *Die räumliche Organisation der linearbandkeramischen Rinderhaltung: naturwissenschaftliche und archäologische Untersuchungen*. *British Archaeological Reports, International Series* 2305 (London 2011).
- Knopf 2002: Th. Knopf, *Kontinuität und Diskontinuität in der Archäologie – Quellenkritisch-vergleichende Studien*. *Tübinger Schriften zur Ur- und Frühgeschichtlichen Archäologie* 6 (Münster/New York/München/Berlin 2002).
- Knopf 2010: Th. Knopf, *Ressourcennutzung und Umweltverhalten prähistorischer Bauern. Eine Analyse archäologischer und ethnographischer Untersuchungen* (Habilitationsschrift Tübingen 2010).
- Koch 2007a: J. K. Koch, *Fremde Bräute und Wanderhandwerker. Zum Rollenverständnis mobiler Individuen in der archäologischen Fachliteratur*. In: M. Benedix/St. Bietz (Hrsg.), *Frauenforscherinnen stellen sich vor. Ringvorlesung Teil IX. Leipziger Studien zur Frauen- und Geschlechterforschung* A 5 (Leipzig 2007) 9–28.

- Koch 2007b: J. K. Koch, Nur Königstöchter und Krieger? Auswertung mediterraner Schriftquellen des 1. Jt. v. Chr. zum Aspekt „Mobilität“ aus der Sicht der mitteleuropäischen Archäologie. Ein Werkstattbericht. In: R. Karl/J. Leskovaar (Hrsg.), *Interpretierte Eisenzeiten 2. Fallstudien, Methoden, Theorie. Tagungsbericht 2. Linzer Gespräche zur interpretativen Eisenzeitarchäologie. Studien zur Kulturgeschichte von Oberösterreich 19* (Linz 2007) 201–210.
- Koch 2009: J. K. Koch, Zwischen Diplomatie und Abenteuer? Auswertung mediterraner Schriftquellen des 2. Jahrtausends v. Chr. aus der Sicht der mitteleuropäischen Archäologie. In: A. Krenn-Leeb/H.-J. Beier/E. Claßen/F. Falkenstein/St. Schwenzer (Hrsg.), *Mobilität, Migration und Kommunikation während des Neolithikums und der Bronzezeit. [Tagungsbericht Xanten 2006] = Varia Neolithica V. Beiträge zur Ur- und Frühgeschichte Mitteleuropas 53* (Langenweissbach 2009) 209–216.
- Koch 2010: J. K. Koch, Mobile Individuen in sesshaften Gesellschaften der Metallzeiten Mitteleuropas. Anmerkungen zur Rekonstruktion prähistorischer Lebensläufe. In: Harald Meller/Kurt W. Alt (Hrsg.), *Anthropologie, Isotopie und DNA. 2. Mitteldeutscher Archäologentag Halle 2009. Tagungen des Landesmuseums für Vorgeschichte Halle 2* (Halle 2010) 95–100.
- Kohl 2003: K.H. Kohl, *Die Macht der Dinge. Geschichte und Theorie sakraler Objekte* (München 2003).
- Kohring/Wynne-Jones 2007: S. Kohring/S. Wynne-Jones (Hrsg.), *Socialising Complexity. Structure, Interaction and Power in Archaeological Discourse* (Oxford 2007).
- Kollewe 2007: C. Kollewe, Wie ‚böse Steine‘ zu ‚wertvollen Stücken‘ werden. Die Produktion kulturellen Erbes, der Aufbau eines Gemeindemuseums und die Konstruktion lokaler Identität in Südmexiko. In: D. Hemme/M. Tauschek/R. Bendix (Hrsg.), *Prädikat Heritage. Wertschöpfungen aus kulturellen Ressourcen* (Münster 2007) 253–276.
- Kopytoff 1986: I. Kopytoff, *The Cultural Biography of Things. Commoditization as Process*. In: A. Appadurai (Hrsg.), *The Social Life of Things. Commodities in Cultural Perspective* (Cambridge 1986) 64–94.
- Kossack 1995: G. Kossack, Kulturlandschaft und Naturkatastrophe. Bäuerliche Verhaltensweisen in prähistorischer Vergangenheit. *Siedlungsforschung* 13, 1995, 31–50.
- Kramer 1986: D. Kramer, Die Kultur des Überlebens. Kulturelle Faktoren beim Umgang mit begrenzten Ressourcen in vorindustriellen Gesellschaften Mitteleuropas. Eine Problemskizze. *Österreichische Zeitschrift für Volkskunde* 89, 1986, 209–226.
- Krauße 2006: D. L. Krauße, Eisenzeitlicher Kulturwandel und Romanisierung im Mosel-Eifel-Raum. Die keltisch-römische Siedlung von Wallendorf und ihr archäologisches Umfeld. *Römisch-Germanische Forschungen* 63 (Mainz 2006).
- Krenn-Leeb et al. 2006: A. Krenn-Leeb/H.-J. Beier/E. Claßen/F. Finkenstein/S. Schwenzer (Hrsg.), *Mobilität, Migration und Kommunikation in Europa während des Neolithikums und der Bronzezeit. Beiträge der Sitzungen der Arbeitsgemeinschaften Neolithikum und Bronzezeit während der Jahrestagung des West- und Süddeutschen Verbandes für Altertumsforschung e.V. in Xanten, 6.-8. Juni 2006. Varia neolithica V* (Langenweissbach 2006).
- Kristiansen 1998: K. Kristiansen, *Europe Before History* (Cambridge 1998).
- Kristiansen/Larsson 2005: K. Kristiansen/T. B. Larsson, *The Rise of Bronze Age Society. Travels, Transmissions and Transformations* (Cambridge 2005).
- Krobath 2009: H. T. Krobath, *Werte. Ein Streifzug durch Philosophie und Wissenschaft* (Würzburg 2009).
- Kroeber 1952: A. L. Kroeber, *The Nature of Culture* (Chicago 1952).
- Kümmel 2009: Ch. Kümmel, *Ur- und frühgeschichtlicher Grabraub. Archäologische Interpretation und kulturanthropologische Erklärung. Tübinger Schriften zur Ur- und Frühgeschichtlichen Archäologie 9* (Münster/New York/München/Berlin 2009).
- Lang 2003: F. Lang, Zurück nach Arkadien? Möglichkeiten und Grenzen der Landschaftsarchäologie. In: M. Heinz/M. K. H. Eggert/U. Veit (Hrsg.), *Zwischen Erklären und Verstehen? Beiträge zu den erkenntnistheoretischen Grundlagen archäologischer Interpretation. Tübinger Archäologische Taschenbücher 2* (Münster et al. 2003) 79–95.
- Latour 2008[1991]: B. Latour, *Wir sind nie modern gewesen. Versuch einer symmetrischen Anthropologie*. Frankfurt am Main 2008 [1991].
- Laube 2007: W. Laube, *Changing Natural Resource Regimes in Ghana. Actors, Structures, Institutions* (Berlin 2007).
- Leach 2003: J. Leach, *Creative Land. Place and Procreation on the Rai Coast of Papua New Guinea* (Oxford 2003).
- LeClair 1962: E. E. LeClair, *Economic Theory and Economic Anthropology. American Anthropologist* 64, 1962, 1179–1203.
- Lee 1968: R. B. Lee, *What Hunters Do for a Living, or, How to Make Out on Scarce Resources*. In: R. B. Lee/I. DeVore (Hrsg.), *Man the Hunter* (Chicago 1968) 30–48.
- Little 2007: M. A. Little, *Human Ecology in Anthropology. Past, Present, and Prospects*. In: V. Bhasin/M. K. Bhasin, *Anthropologist* 3, 2007 [Special Volume: Anthropology Today: Trends, Scope and Applications] 25–38.

- Low/Heinen 1993: B. S. Low/J. T. Heinen, Population, Resources, and Environment. Implications of Human Behavioral Ecology for Conservation. *Population and Environment* 15, 1, 1993, 7–41.
- Lüning 2005: J. Lüning, Bandkeramische Hofplätze und die absolute Chronologie der Bandkeramik. In: J. Lüning/Ch. Frirdich/A. Zimmermann (Hrsg.), *Die Bandkeramik im 21. Jahrhundert. Symposium in der Abtei Brauweiler bei Köln vom 16.9. – 19.9.2002* (Rahden 2005) 49–74.
- Lüning 2012: J. Lüning, Bandkeramische Hofplätze und Erbgel. In: T. Kienlin/A. Zimmermann (Hrsg.), *Metals and Societies. Alternatives to Hierarchical Systems in Modelling Social Formations. International Conference at the Ruhr-Universität Bochum, Germany, October 22–24, 2009. Universitätsforschungen zur Prähistorischen Archäologie* (Bonn 2012) 197–202.
- Luig/von Oppen 1997: U. Luig/A. von Oppen, The Making of African Landscapes. *Paideuma. Mitteilungen zur Kulturkunde* 43, 1997, 1–45.
- Lynch 2012: G. Lynch, *The Sacred in the Modern World. A Cultural Sociological Approach* (Oxford 2012).
- Lyons 2002: C. L. Lyons (Hrsg.), *The Archaeology of Colonialism. A Symposium Sponsored by the Getty Research Institute and Held at the Fourth World Archaeological Congress in Cape Town, South Africa, 10–14 January 1999* (Los Angeles 2002).
- Macbeth 1997: H. Macbeth, *Food Preferences and Taste. Continuity and Change* (Oxford 1997).
- Mace/Pagel 1994: R. Mace/M. Pagel, The Comparative Method in Anthropology. *Current Anthropology* 35, 5, 1994, 549–557.
- McDannell 1995: C. McDannell, *Material Christianity. Religion and Popular Culture in America* (New Haven, Conn. 1995).
- Miller 1987: D. Miller, *Material Culture and Mass Consumption* (New York 1987)
- Mohldaschl 2007: M. Mohldaschl (Hrsg.), *Immaterielle Ressourcen. Nachhaltigkeit von Unternehmensführung und Arbeit I* (München/Mering 2007²).
- Moiné 2009: L. R. Moiné, *Archäologische Untersuchungen zu den Migrationsbewegungen der Kelten in ausgewählten Regionen zwischen dem Donaugebiet und Kleinasien während der Früh- und Mittelatlantenezeit. Dissertation, Universität Regensburg* (2009) [urn:nbn:de:bvb:355-opus-12578]
- Müller 1994: J. Müller, *Altersorganisation und Westhallstatt: ein Versuch. Ethnographisch-Archäologische Zeitschrift* 35, 1994, 220–240.
- Müller 2012: J. Müller, *Wie entsteht Ungleichheit?* In: T. Kienlin/A. Zimmermann (Hrsg.), *Metals and Societies. Alternatives to Hierarchical Systems in Modelling Social Formations. International Conference at the Ruhr-Universität Bochum, Germany, October 22–24, 2009. Universitätsforschungen zur Prähistorischen Archäologie* (Bonn 2012) 203–212.
- Müller-Christ 2011: G. Müller-Christ, *Sustainable Management. Coping with the Dilemmas of Resource-Oriented Management* (Heidelberg 2011).
- Müller-Wollermann 1985: R. Müller-Wollermann, *Warentausch im alten Ägypten. Journal of the Economic and Social History of the Orient* 28, 1985, 121–68.
- Murray 1995: O. Murray, *Das frühe Griechenland* (München 1995).
- Needham 1975: R. Needham, *Polythetic Classification. Convergences and Consequences. Man* 10, 3, 1975, 349–369.
- Neipert 2006: M. Neipert, *Der ‚Wanderhandwerker‘. Archäologisch-ethnographische Untersuchungen. Tübinger Texte. Materialien zur Ur- und Frühgeschichtlichen Archäologie* 6 (Rahden 2006).
- Niemann 2006: S. Niemann, *Kontext und Relativität von „Ressourcen“.* In D. Hummel/C. Hertler/C. Janowicz/A. Lux/S. Niemann (Hrsg.), *Ressourcen und Bevölkerungsdynamiken – Ausgewählte Konzepte und sozial-ökologische Perspektiven. Demons Working Papers* 6. Institut für sozial-ökologische Forschung (Frankfurt 2006) 7–19. [http://www.demons-project.de/material/demons_wp6.pdf#page=9]
- Olshausen/Sonnabend 2006: Eckart Olshausen/Holger Sonnabend (Hrsg.), *„Troianer sind wir gewesen“ – Migrationen in der antiken Welt. Stuttgarter Kolloquium zur Historischen Geographie des Altertums* 8, 2002 = *Geographica Historica* 21 (Stuttgart 2006).
- Osterhammel 2004: J. Osterhammel, *Die Vielfalt der Kulturen und die Methoden des Kulturvergleichs.* In: F. Jaeger/B. Liebsch (Hrsg.), *Handbuch der Kulturwissenschaften, 2. Paradigmen und Disziplinen* (Stuttgart/Weimar 2004) 50–65.
- Ostrom/Gardner/Walker 1994: E. Ostrom/R. Gardner/J. M. Walker, *Rules, Games, and Common-Pool Resources* (Ann Arbor 1994).
- Otto 1923: R. Otto, *The Idea of the Holy* (Oxford 1923).
- Pare 2000: Ch. F. E. Pare (Hrsg.), *Metals Make the World Go Round. The Supply and Circulation of Metals in Bronze Age Europe* (Oxford 2000).
- Parsons 1970: T. Parsons, *The Social System* (London 1970).
- Pétrequin 1984: P. Pétrequin, *Gens de l'Eau, Gens de la Terre. Ethno-archéologie des communautés lacustres* (Paris 1984).

- Pfälzner 2006: P. Pfälzner, Das System des „kommerzialiserten Geschenkaustausches“ im 2. Jahrtausend v. Chr. in Syrien. In: H. Klinkott/S. Kubisch (Hrsg.), *Geschenke und Steuern, Zölle und Tribute. Antike Abgabenformen* (Leiden 2006) 117–131.
- Pimentel et al. 1997: D. Pimentel/J. Houser/E. Preiss/O. White/H. Fang/L. Mesnick/T. Barsky/St. Tariche/J. Schreck/Sh. Alpert, *Water Resources. Agriculture, the Environment, and Society*. *BioScience* 47, 2, Feb., 1997, 97–106.
- Platenkamp 2003: J. Platenkamp, Strukturalismus in der Ethnologie. In: B. Beer/H. Fischer (Hrsg.), *Ethnologie. Einführung und Überblick* (Berlin 2003) 295–308.
- Polanyi 1944: K. Polanyi, *The Great Transformation* (New York 1944).
- Posluschny 2002: A. Posluschny, Die hallstattzeitliche Besiedlung im Maindreieck. GIS-gestützte Fundstellenanalysen. *British Archaeological Reports, International Series 1077* (Oxford 2002).
- Prebisch 1950: R. Prebisch, *The Economic Development of Latin America and Its Principal Problems* (New York 1950).
- Preissing 2009: S. Preissing, *Tauschen – Schenken – Geld? Ökonomische und gesellschaftliche Gegenentwürfe* (Berlin 2009).
- Price et al. 2004: T. D. Price/C. Knipper/G. Grupe/V. Smrcka, Strontium Isotopes and Prehistoric Human Migration: The Bell Beaker Period in Central Europe. *European Journal of Archaeology* 7, 2004, 9–40.
- Prien 2005: R. Prien, *Archäologie und Migration. Universitätsforschungen zur Prähistorischen Archäologie* 120 (Bonn 2005).
- Primas 2009: M. Primas, Nicht nur Kupfer und Salz. Die Alpen im wirtschaftlichen und sozialen Umfeld des 2. Jahrtausends. In: M. Bartelheim/H. Stäuble (Hrsg.), *Die wirtschaftlichen Grundlagen der Bronzezeit Europas. Forschungen zur Archäometrie und Altertumswissenschaft* 4 (Rahden 2009) 189–211.
- Rappaport 1979: R. A. Rappaport, *Ecology, Meaning, and Religion* (Richmond, CA. 1979).
- Reckwitz 2004: A. Reckwitz, Die Kontingenzperspektive der ‚Kultur‘. Kulturbegriffe, Kulturtheorien und das kulturwissenschaftliche Forschungsprogramm. In: F. Jaeger/B. Liebsch (Hrsg.), *Handbuch der Kulturwissenschaften* 3, Themen und Tendenzen (Stuttgart/Weimar 2004) 1–20.
- Reich 2004: H. Reich, Die ‚orientalische Despotie‘. In: B. Schefold (Hrsg.), *Wirtschaftssysteme im historischen Vergleich* (Stuttgart 2004) 493–542.
- Renfrew 2001: C. Renfrew, Symbol Before Concept. Material Engagement and the Early Development of Society. In: I. Hodder (Hrsg.), *Archaeological Theory Today* (Cambridge 2001) 122–40.
- Renger 1991: J. Renger, *Wirtschaft und Gesellschaft*. In: B. Hrouda (Hrsg.), *Der alte Orient* (München 1991) 187–216.
- Robbins 2009: J. Robbins, *Morality, Value and Radical Cultural Change*. In: M. Heintz (Hrsg.), *The Anthropology of Moralities* (New York/Oxford 2009) 62–79.
- Rokeach 1973: M. Rokeach, *The Nature of Human Values* (New York 1973).
- Romer 1986: P. Romer, Increasing Returns and Long Run Growth. *Journal of Political Economy* 94, 1986, 1002–1037.
- Roosevelt 2009: Ch. H. Roosevelt, *The Archaeology of Lydia. From Gyges to Alexander* (Cambridge 2009).
- Roscoe 2000: P. Roscoe, *New Guinea Leadership as Ethnographic Analogy. A Critical Review*. *Journal of Archaeological Method and Theory* 7, 2000, 79–126.
- Ross 1999: M. Ross, *The Political Economy of the Resource Curse*. *World Politics* 51, 1999, 297–322.
- Rouse 1986: I. Rouse, *Migrations in Prehistory. Inferring Population Movement from Cultural Remains* (Ann Arbor 1986).
- Rowlands 1971: M. J. Rowlands, *The Archaeological Interpretation of Prehistoric Metalworking*. *World Archaeology* 3, 1971, 210–224.
- Sachs/Warner 1995: J. D. Sachs/A. M. Warner, *Natural Resource Abundance and Economic Growth*. NBER Working Paper 5398, 1995.
- Sallares 2007: R. Sallares, *Ecology*. In: W. Scheidel/I. Morris/R. P. Saller (Hrsg.), *The Cambridge Economic History of the Greco-Roman World* (Cambridge 2007) 15–37.
- Sahlins 1960: M. Sahlins, *Political Power and the Economy in Primitive Society*. In: G. E. Dole/R. L. Carneiro (Hrsg.) *Essays in the Science of Culture* (New York 1960) 390–415.
- Sahlins 1972: M. Sahlins, *Stone Age Economics* (London 1972).
- Sahlins 1976: M. Sahlins, *Culture and Practical Reason* (Chicago 1976).
- Sahlins 1985: M. Sahlins, *Island of History* (London/New York 1985).
- Sahlins 1999a: M. Sahlins, *What is Anthropological Enlightenment? Some Lessons of the Twentieth Century*. *Annual Review of Anthropology* 28, 1999, i–xxiii.
- Sahlins 1999b: M. Sahlins, *Two or Three Things That I know About Culture*. *Journal of the Royal Anthropological Institute* 5, 3, 1999, 399–421.
- Sahlins 2000: M. Sahlins, *Culture in Practice. Selected Essays* (New York 2000).
- Santos 2006: B. de S. Santos, *The Rise of the Global Left* (London 2006).

- Scharl 2004: S. Scharl, Die Neolithisierung Europas. Ausgewählte Modelle und Hypothesen. Würzburger Arbeiten zur Prähistorischen Archäologie 2 (Rahden 2004).
- Scheidel/Morris/Saller 2007: W. Scheidel/I. Morris/R. P. Saller (Hrsg.), The Cambridge Economic History of the Greco-Roman World (Cambridge 2007).
- Schenkel 1978: W. Schenkel, Die Bewässerungsrevolution im alten Ägypten (Mainz 1978).
- Schlee 2004: G. Schlee, Taking Sides and Constructing Identities. Reflections on Conflict Theory. *Journal of the Royal Anthropological Institute* 10, 1, 2004, 135–156.
- Schlee 2006: G. Schlee, Wie Feindbilder entstehen. Eine Theorie religiöser und ethnischer Konflikte (München 2006).
- Schwartz/Bilsky 1987: S. H. Schwartz/W. Bilsky, Towards a Psychological Structure of Human Values. *Journal of Personality and Social Psychology* 53, 1987, 550–62
- Schwartz 1994: S. H. Schwartz, Are there Universal Aspects in the Structure and Content of Human Values? *Journal of Social Issues* 50, 4, 1994, 19–45
- Schweizer 2000: B. Schweizer, Der Neue Pauly 14 (Stuttgart 2000) 939–53, s. v. Klassische Archäologie III. Kontextuelle Archäologie.
- Service 1962: E. R. Service, Primitive Social Organization (New York 1962).
- Service 1975: E. R. Service, Origins of the State and Civilization (New York 1975).
- Shanks/Hodder 1995: M. Shanks/I. Hodder, Processual, Postprocessual and Interpretive Archaeologies. In: I. Hodder et al. (Hrsg.), *Interpreting Archaeology. Finding Meaning in the Past* (London 1995) 3–29.
- Shils 1975: E. Shils, Center and Periphery. *Essays in Macro-Sociology* (Chicago 1975).
- Siegrist 2003: H. Siegrist, Perspektiven der vergleichenden Geschichtswissenschaft. Gesellschaft, Kultur und Raum. In: Kaelble/Schriewer 2003, 305–339.
- Sielmann 1971: B. Sielmann, Der Einfluß der Umwelt auf die neolithische Besiedlung Südwestdeutschlands unter besonderer Berücksichtigung der Verhältnisse am Oberrhein. *Acta Praehistorica et Archaeologica* 2, 1971, 65–197.
- Springer 2006: M. Springer, Stichwort ‚Völkerwanderung‘. *Reallexikon der Germanischen Altertumskunde* II, 32 (2006) 509–517.
- Steuer 2002: H. Steuer, Stichwort ‚Mobilität‘. *Reallexikon der Germanischen Altertumskunde* II, 20 (2002) 118–123.
- Steward 1955: J. H. Steward, The Theory of Culture Change. The Methodology of Multilinear Evolution (Urbana 1955).
- Stöllner 1999: Th. Stöllner, Der prähistorische Salzbergbau am Dürrnberg bei Hallein, I. Forschungsgeschichte – Forschungsstand – Forschungsanliegen. *Dürrnberg-Forschungen* 1 (Rahden 1999).
- Stöllner 2002: Th. Stöllner, Der Dürrnberg, sein Salzwesen und das Inn-Salzach-Gebiet als Wirtschaftsraum. In: C. Dobiat/S. Sievers/Th. Stöllner (Hrsg.), *Dürrnberg und Manching. Wirtschaftsarchäologie im keltischen Raum. Akten des Internationalen Kolloquiums Hallein/Bad Dürrnberg 1998. Kolloquien zur Vor- und Frühgeschichte* 7 (Bonn 2002) 77–94.
- Storberg 2002: J. Storberg, The Evolution of Capital Theory. A Critique of a Theory of Social Capital and Implications for HRD. *Human Resource Development Review* 1, 4, 2002, 468–499.
- Suttles 1968: W. Suttles, Coping with Abundance. Subsistence on the North-West Coast. In: R. B. Lee/I. DeVore (Hrsg.), *Man the Hunter* (Chicago 1968) 56–68.
- Thompson 2003: M. Thompson, Mülltheorie. Über die Schaffung und Vernichtung von Werten (Essen 2003).
- Tilley 2007: C. Tilley, Materiality in Materials. *Archaeological Dialogues* 14, 2007, 16–20.
- Tiverios 2008: M. Tiverios, Greek Colonisation of the Northern Aegean. In: Tsetschladze 2008, 1–154.
- Treister 1999: M. Y. Treister, The Role of Metals in Ancient Greek History. *Mnemosyne Supplement* 156 (Leiden/New York/Köln 1996).
- Tsetschladze 2006: G. R. Tsetschladze, (Hrsg.), *Greek Colonisation Vol 1: An Account of Greek Colonies and Other Settlements Overseas* (Leiden 2006).
- Tsetschladze 2008: G. R. Tsetschladze, (Hrsg.), *Greek Colonisation Vol 2: An Account of Greek Colonies and Other Settlements Overseas* (Leiden 2008).
- Tsetschladze 2008: G. R. Tsetschladze, 'Grain for Athens'. The View from the Black Sea. In: R. Alston/O. M. Van Nij (Hrsg.), *Feeding the Ancient Greek City* (Leuven/Paris/Dudley 2008) 47–62.
- Tütken et al. 2008: Th. Tütken/C. Knipper/K. W. Alt, Mobilität und Migration im archäologischen Kontext: Informationspotential von Multi-Element-Isotopenanalysen (Sr, Pb, O). In: J. Bemann/M. Schmauder (Hrsg.), *Kulturwandel in Mitteleuropa. Langobarden – Awaren – Slawen. Akten der Internationalen Tagung in Bonn vom 25.–28. Feb. 2008* (Bonn 2008) 13–42.
- Urban 2002: O. Urban, Gedanken zu einer Wirtschaftsarchäologie. In: C. Dobiat/S. Sievers/Th. Stöllner (Hrsg.), *Dürrnberg und Manching. Wirtschaftsarchäologie im keltischen Raum. Akten des Internationalen Kolloquiums Hallein/Bad Dürrnberg 1998. Kolloquien zur Vor- und Frühgeschichte* 7 (Bonn 2002) 27–32.

- van Dommelen 2012: P. van Dommelen, Colonialism and Migration in the Ancient Mediterranean. *Annual Review of Anthropology* 41, 2012, 393–409.
- Vayda 1961: A. Vayda, Expansion and Warfare among Swidden Agriculturalists. *American Anthropologist* 63, 1961, 346–358.
- Veit 1998: U. Veit, Zwischen Tradition und Revolution. Theoretische Ansätze in der britischen Archäologie. In: M. K. H. Eggert/U. Veit (Hrsg.), *Theorie in der Archäologie. Zum Stand der englischsprachigen Diskussion*. Tübinger Archäologische Taschenbücher 1 (Münster/New York/München/Berlin 1998) 15–65.
- Veit et al. 2003: U. Veit/T. Kienlin/Ch. Kümmel/S. Schmidt (Hrsg.), *Spuren und Botschaften. Interpretationen materieller Kultur. Beiträge einer Internationalen Fachtagung*, Tübingen, 2.–4. Juni 2000. Tübinger Archäologische Taschenbücher 3 (Münster/New York/München/Berlin 2003).
- Wacker/Blank 1999: H. Wacker/J.E. Blank, *Ressourcenökonomik II. Erschöpfbare natürliche Ressourcen* (München 1999).
- Wahle 1920: E. Wahle, Die Besiedelung Südwestdeutschlands in vorrömischer Zeit nach ihren natürlichen Grundlagen. *Berichte der Römisch-Germanischen Kommission* 12, 1920, 1–75.
- Weber 1919: M. Weber, *Wissenschaft als Beruf. Geistige Arbeit als Beruf. Vier Vorträge vor dem Freistudentischen Bund. Erster Vortrag* (München/Leipzig 1919).
- Weingarten 2005: P. Weingarten (Hrsg.), *Strukturierung von Raum und Landschaft. Konzepte in Ökologie und der Theorie gesellschaftlicher Naturverhältnisse* (Münster 2005).
- Wilk/Cliggett 2007: R. R. Wilk/L. C. Cliggett, *Economies and Cultures. Foundations of Economic Anthropology* 2 (Colorado 2007).
- Wilson 1979: B. Wilson, *Rationality* (Oxford 1979).
- Wittfogel 1981: K. A. Wittfogel, *Die orientalische Despotie. Eine vergleichende Untersuchung totaler Macht* (Frankfurt a. M. 1981).
- Wolf 1972: E. Wolf, *Ownership and Political Ecology*. *Anthropological Quarterly* 45, 3, 1972, 201–205.
- Wotzka 1993: H.-P. Wotzka, Zur Tradition der Keramikdeponierung im äquatorialen Regenwald Zaïres. Ein Bekenntnis zur allgemein-vergleichenden Analogie. *Ethnographisch-Archäologische Zeitschrift* 34, 1993, 251–283.
- Yoffee 1993: N. Yoffee, Too Many Chiefs? (or, Safe Texts for the '90s). In: N. Yoffee/A. G. Sherratt (Hrsg.), *Archaeological Theory. Who Sets the Agenda? New Directions in Archaeology* (Cambridge 1993) 60–78.
- Zimmermann 2012: A. Zimmermann, Cultural Cycles in Central Europe Between the Neolithic and the Iron Age. In: T. Kienlin/A. Zimmermann (Hrsg.), *Metals and Societies. Alternatives to Hierarchical Systems in Modelling Social Formations*. International Conference at the Ruhr-Universität Bochum, Germany, October 22–24, 2009. *Universitätsforschungen zur Prähistorischen Archäologie* (Bonn 2012) 137–146.