

University of Groningen

Rethinking the culture-economy dialectic

Brons, Lajos Ludovic

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2005

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Brons, L. L. (2005). *Rethinking the culture-economy dialectic*. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

chapter 8

CONSIDERATIONS AND IMPLICATIONS

Κακοὶ μάρτυρες ἀνθρώποισιν ὀφθαλμοὶ καὶ ὄτα βαρβάρους ψυχὰς ἐχόντων.
(*Eyes and ears are bad witnesses to men if they have souls that do not understand their language.*)
Heraclitus of Ephesus 6th century BC, fragment 107

Wovon man nicht sprechen kann, darüber muß man schweigen.
Ludwig Wittgenstein 1922, § 7

8 / 1 / introduction

The empirical tests presented in the preceding chapter can be used to refine the CED, to determine which theories or aspects can be considered to be (relatively) plausible and which are not. Not all (possible) theories of the CED have been tested, however, and those that have been were tested with different methods of varying rigor, and yielding very different results. The main goal of this study, however, was not to present a final comprehensive theory on the relationships between culture and economy (a *theoretical* synthesis of the CED), but to determine what it means to ask (scientific) questions on these relationships and why these questions seem to be so important in / to social science (which could be regarded a *critical* synthesis of the CED).

Chapter 1 stated that the goal of this research project consisted of a number of interrelated parts of which the most important were: (1) a comparison and analysis of the existing theories of the CED, (2) a review of their empirical (dis-)confirmation, (3) the construction of some kind of synthesis and finally, (4) to consider the relevance and implications of these research questions and their answers to social science in general and human geography in particular (see § 1.2). Most of these parts have been dealt with in preceding chapters. This final chapter deals with the possibility of synthesis, with meta-theoretical issues and with implications for social science. Section 8.2 briefly reviews the theories and tests presented in chapter 7. Some meta-theoretical conclusions based on this review are presented in section 8.3. This latter section deals with the scientific status of the CED and the nature of the relationship in CED theories mainly, but also considers (the) synthesis of

the CED. Sections 8.4 and 8.5 assess the implications for social science hereof and of the rest of this study. The final section (§ 8.6) summarises this chapter and presents some closing comments.

8 / 2 / a review of theories, confirmations and refutations

In chapter 7 three groups of CED theories were presented. The first group included historical materialism, the first grand theory of the CED, and related stage and modernisation theories. The second group originated from the second grand theory of the CED, Weber's theory on the 'entrepreneurial spirit', and included theories on cultural influences on entrepreneurship and economic growth. The third group was labelled "minor theories" because these were not directly related to either of the two grand theories.

This section reviews these theories and their empirical (dis-) confirmation, insofar as (dis-) confirmation is possible, of course (see § 7.1.1). Subsection 8.2.1 briefly reviews the theories and results presented in (sub)sections 7.2 and 7.4.1 (the first grand theory); subsection 8.2.2 deals with (sub)sections 7.3, 7.4.2-3 (the second grand theory) and 7.5 (minor theories). New empirical tests presented in section 7.6 are integrated in subsections 8.2.1 and 8.2.2. Section 8.3 continues with some meta-theoretical considerations, conclusions and some notes towards a synthesis based on the review presented in this section.

8 / 2 / 1 / historical materialism

The first grand theory of the CED (GT1) was historical materialism (HM), a body of interrelated theories, ideas and remarks developed by Marx and Engels on the economic causes of social, political and cultural change. Many versions and interpretations of HM exist. An integrated version of HM was formulised as T7.6:

$$\mathbf{T7.6_R} \quad [\Delta \{ \Phi, \mathbb{M} \}_{\text{PCD}} \stackrel{w}{\Leftrightarrow^s} \Delta \mathbb{M}_{\text{leg.pol}}] \stackrel{w}{\Leftrightarrow^s} \Delta (\mathbb{M} - (\mathbb{M}_{\text{PCD}} \cup \mathbb{M}_{\text{leg.pol}})) .$$

The most important theories of HM, 'sub-theories' of T7.6, as developed by Marx and Engels themselves were:

$$\mathbf{T7.7_R} \quad \Delta \mathbb{M}_{\text{prod}} \Rightarrow^s \Delta \mathbb{M}_{\text{leg.pol}} , \text{ and}$$

$$\mathbf{T7.8_R} \quad \Delta \{ \mathbb{B}_{\text{PCD}}, \mathbb{M}_{\text{PCD}} \} \Rightarrow^s \Delta (\mathbb{M} - (\mathbb{M}_{\text{PCD}} \cup \mathbb{M}_{\text{leg.pol}})) .$$

Neither of these two theories has been statistically confirmed. In case of T7.7 statistical testing is nearly impossible because the categories or phenomena related seem to be measurable only as nominal variables. In other words, the causes and effects in these theories can be classified only (in which a change Δ would be a change only if it involves a class boundary crossing, which would imply that change is a conceptual rather than a 'real' event). Moreover, the spatio-temporal scale of these theories limits the possibilities for data gathering for statistical analysis. There is, for example, not enough data available to statistically test whether the introduction of agriculture ($\Delta\mathbf{M}_{\text{prod}}$) lead to changing political systems ($\Delta\mathbf{M}_{\text{leg.pol}}$) in all or nearly all cases. Nevertheless, historical analysis suggests that T7.7 may be true.

T7.8 is untestable mainly because its categories are far too broad. It is possible to test whether particular economic differences are related to particular cultural phenomena, but not whether the *whole* of productive, consumptive and distributive behaviour *and* meta-behaviour is causally related to the *whole* of *other* meta-behaviour. However, T7.8 proved to be inspirational to many theorists in the 20th century. Modernisation theories are generally variants of T7.8 and are in some cases more specific and may hence be testable.

Besides these 'children', HM has 'parents' too. Before Marx and Engels, a number of 18th century scientists and philosophers including Vico and Smith suggested that the values (\mathcal{N} : Smith) or values and ideas ($\mathcal{N}\cup\mathcal{T}$: Vico) of a society are determined by the way that society deals with nature and natural resources as a means of subsistence \mathbf{P}_{SNT} :

$$\mathbf{T7.11}_R \quad \Delta\mathbf{P}_{\text{SNT}} \Rightarrow^s \Delta\mathcal{N} .$$

This notion of \mathbf{P}_{SNT} (Vico's 'order of institutions') is strongly related to the 19th century concept of "economy" as \mathbf{M}_{PCD} . Both \mathbf{P}_{SNT} and \mathbf{M}_{PCD} are subsets of \mathbf{M}_{SNT} , the meta-behaviour of subsistence, transformation of nature, technology and economy. Combining strong causality in T7.6 (and, hence, T7.7, T7.8) and T7.11 in a single meta-theory of GT1 would result in:

$$\mathbf{T8.1} \quad \Delta\{\mathbf{M},\Phi\}_{\text{SNT}} \Rightarrow \Delta(\mathbf{M}-\mathbf{M}_{\text{SNT}}) ,$$

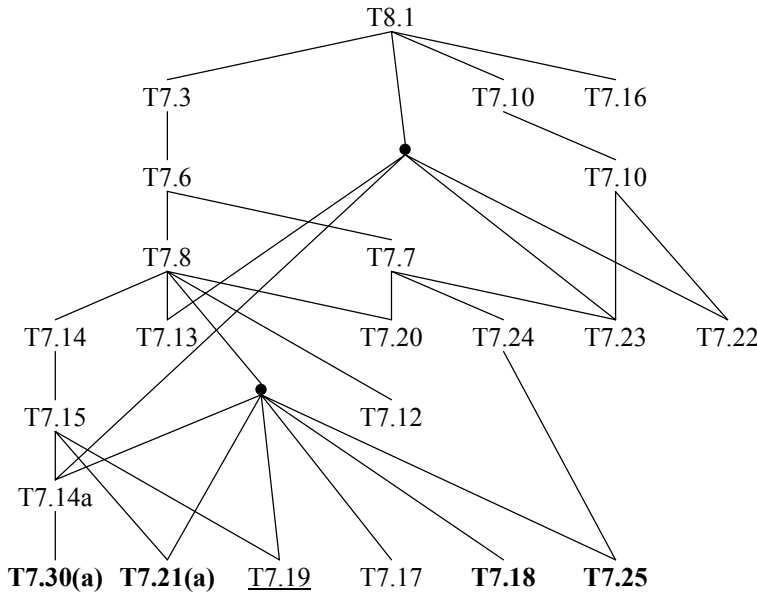
in which Φ_{SNT} is the set of all actual entities related to subsistence, (transformation of) nature, technology and economy of which actual behaviour related to SNT, \mathbf{B}_{SNT} , is a subset that includes the 20th century interpretation of "economy" as \mathbf{B}_{PCD} (in formal terms: $\mathbf{B}_{\text{PCD}} \subset \mathbf{B}_{\text{SNT}} \subset \Phi_{\text{SNT}}$). T8.1 can be interpreted as 'natural and other circumstances and the way societies deal with these to assure their existence determines (or influence at least) (other aspects of) their culture'.

Like T7.8, T7.11 and/or T8.1 are difficult, if not impossible, to test. Of course more specific versions of these theories can be tested and confirmed, but a theory that is more general than its confirmation is hardly a good theory (see also § 7.2) and is in need of refinement. Falsification of a more specific version, on the other hand, would not refute

these general theories since they do not claim that there is a causal relationship for every possible subset of the causes and effects in the general theory.

Figure 8.1 graphically represents a taxonomy of GT1 theories showing the many variants and versions of the theory. Unfortunately, many of the modernisation theories and other variants of GT1 developed in the course of the 20th century are just as general as T7.8 or T7.11 (for example: T7.14; T7.15; T7.16; T7.17; T7.24). Others were more specific but untestable nevertheless, because their categories were immeasurable or indistinguishable from other phenomena (for example: T7.12; T7.13; T7.20; T7.22; T7.23).

figure 8.1: *a taxonomy of the first grand theory*



Weak causality in the opposite direction (from culture to economy) is ignored in this taxonomy.

Theories confirmed empirically are printed boldface; refuted theories are underlined.

The two black dots represent non-formalised intermediate theories; the dot below T8.1: effect = individualism; the dot below T7.8: cause = wealth.

Only four (groups of) theories were relatively specific and assumed a relationship between measurable phenomena. Firstly, theories of the effects of some subset of $\{\mathbf{M}, \Phi\}_{\text{SNT}}$ on the level of individualism (a subset of \mathcal{N}) (the theories connected by lines downward from the upper black dot in figure 8.1). This group includes T7.14a and T7.30(a), which assume that individualism is promoted by wealth $\mathcal{V}(\mathbf{B}_{\text{PCD}})$; T7.13, which assumes that individualism is caused by money; and T7.22 and T7.23, which assume that individualism is caused by changes in the way that society deals with nature and natural resources as a means of subsistence \mathbf{P}_{SNT} or by changes in the institutions, rules and customs of production \mathbf{P}_{prod} .

The latter three theories, however, seem to be rather difficult to test. In case of T7.13 this is mainly caused by the fact that the institution of money seems to coincide with other economic differences. In case of T7.22 and T7.23 this is because \mathbb{P}_{SNT} and \mathbb{P}_{prod} cannot be measured appropriately for statistical testing. On the other hand, the other theory of this group:

T7.30a $\triangleq \mathcal{V}(\mathbb{B}_{\text{PCD}}) \Rightarrow^s \triangleq \mathcal{N}_{\text{individualism}}$,

the theory that increasing wealth leads to increasing individualism, is empirically confirmed repeatedly.

The second group consists of Inglehart's theories on the influence of wealth on post-materialism, postmodernism, rationality and/or self-expression. All of the latter are strongly interrelated. Hence, these theories can be summarised as:

T7.21_R $\triangleq \mathcal{V}(\mathbb{B}_{\text{PCD}}) \Rightarrow^s \triangleq \mathcal{N}_{\text{post-materialism}}$.

Like T7.30a, T7.21 seems to be confirmed empirically although the 'evidence' is not as strong and the relationship may not be linear.

The third 'group of theories' consists of a single theory, Bell's claim that increasing wealth causes a decreasing work-ethic (T7.19). There seems to be little empirical evidence for this theory.

Like the third, the fourth group consists of a single theory, the theory that increasing wealth results in increasing economic freedom (T7.25), which is closely related to T7.7. T7.25 is confirmed by both historical analysis and statistical tests. Related theories that were not included, but nevertheless empirically confirmed, claim that increasing wealth also leads to more civil and political rights, although Douthwaite (1992) showed that there may be a limit to this process, beyond which a further increase of wealth leads to a decrease of civil rights.

8 / 2 / 2 / the entrepreneurial spirit

The second grand theory (GT2) was introduced by Weber, who claimed that capitalism was the result of the 'entrepreneurial spirit', which in turn was caused by Protestant asceticism and rationalism. In most of the Weber-inspired theories, it was assumed that values promote some aspect or indicator of entrepreneurship (see § 7.3) and that the latter promotes economic growth. Weber himself, however, assumed that not just values \mathcal{N} but also ideas \mathbb{T} influence entrepreneurship. Moreover, not all theorists are equally explicit on the relationship between entrepreneurship and economic growth. Therefore, the most general forms of GT2 are:

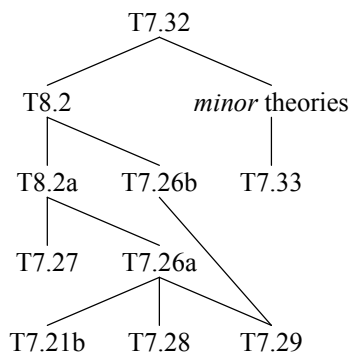
T8.2 $\triangle M \Rightarrow \triangle B_{\text{entrepreneurship}} \Rightarrow \triangle \Delta \mathcal{V}(\mathcal{B}_{\text{PCD}})$,

of which the first half is the most important (or at least most fertile) part:

T8.2a $\triangle M \Rightarrow \triangle B_{\text{entrepreneurship}}$.

Nearly all studies in GT2 were special cases of T7.26a ($\triangle \mathcal{N} \Rightarrow \triangle B_{\text{entrepreneurship}}$), itself a special case of T8.2a. The specific values (causes) and the aspect or indicator of entrepreneurship (effects) differ widely among theorists, however. Among values suggested to have positive effects are individualism (Tawney), need for achievement (McClelland), internal locus of control (Thomas & Mueller) and many, many more. Inglehart's post-materialism, on the other hand, is assumed to have a negative effect. After Hofstede's measurement of international differences in value orientations, empirical research in the CED, especially in GT2, skyrocketed. By now every possible value (high / low) on Hofstede's dimensions has been related to some aspect of entrepreneurship. Figure 8.2 graphically represents a taxonomy of GT2 theories and *minor* theories of the CED.

figure 8.2: a taxonomy of the second grand theory and minor theories



Empirical confirmation of GT2 is far less strong than that of GT1. Many correlations between aspects of entrepreneurship (new firm formation or self-employment and innovation mainly) have been found, but few effects have proven to be consistent. Individualism and Hofstede's other dimensions may have positive and negative effects; the same is true for post-materialism. The relationship between values and entrepreneurship is far more complex than often assumed.

While the confirmation of the first part of GT2 is unclear (and inconsistent), the second part of GT2, the theory that entrepreneurship promotes economic growth (T7.26b), was shown to be even more uncertain. There simply is no consistent empirical evidence for this part of the theory. Neither do there seem to be other strong and/or clear effects of culture on economic growth. Theories of such 'other effects' haven't been labelled "minor theories" in

chapter 7. These include theories on the influence of institutions, consumption, and geography, and theories that do not assume that culture causes economic change but may facilitate it. Some institutions, such as the educational system and democracy, *may* promote economic growth; others, such as economic freedom or openness, do not seem to have (measurable) effects.

The possible influence of consumption is more problematic due to the fact that consumption is strongly influenced by wealth (income) and production (including marketing as an aspect of productive and distributive behaviour). The relationship is difficult to test because there does not seem to be useable data available on consumption. Moreover, the influence of wealth and production may make the cultural impact on consumption relatively unimportant.

Geography, finally, is important in the CED in two ways. Firstly the system of the CED itself is always located in a physical environment that limits and guides the possibilities of both poles. The economic pole, defined as $\{\mathbf{M}, \Phi\}_{\text{SNT}}$ is clearly related to geography, but so is culture. Landscape, for example, may be an essential part of cultural identity (*e.g.* Matless 1998). Secondly, agglomeration (including urbanisation) as a cultural phenomenon may strongly influence the economic potential of cities and regions.

8 / 3 / towards a synthetic theory of the CED

Besides the empirical results summarised and reviewed in (sub)sections 7.7.1 and 8.2, some meta-theoretical conclusions can be drawn from this study. This section deals with questions on, for example, the scientific status of the CED and the nature of the relationship (conceptual or causal; see § 7.7.2) in the different types of theories. Hence, this section tries to present at least part of the answer to the question what it means to study the CED, which was the impetus for the research project. By reviewing these meta-theoretical issues and especially by analysing the relationships in the CED, this section also aims at synthesis or at least at the assessment of the possibility of synthesis.

8 / 3 / 1 / meta-theoretical issues

The overview of theories and tests presented in chapter 7 and briefly reviewed above resulted in some theoretical conclusions on the CED summarised in subsection 7.7.1, but also leads to a smaller number of *meta-theoretical* conclusions. The three main conclusions of this type are related to variety, falsificability, and complexity.

Firstly, the body of theories on relationships between culture and economy is characterised by a bewildering variety of concepts, categories and ideas. There seem, however, to be two

broad types of theories: (1) very broad and vague theories that are impossible to test; and (2) very specific theories that are mostly tested but are not always consistently confirmed or refuted. Most of the theoretical contributions seem to be of the first type. The conclusion that the CED is reigned by vagueness and conceptual confusion seems to be justified. But the tremendous variation in theories and empirical results also suggests that there is no such thing as a single body of theories of the CED. There are many theories, some of these are related historically, others are related theoretically or conceptually, but there also are many broken links, loose ends and new starts.

Secondly, many of the relationships within the CED are so complex and/or so vague, that falsification is virtually impossible. The relationship between post-materialism and entrepreneurship may serve as an example (another example, that of GT1, was explained in § 8.2.1). Inglehart assumes that post-materialism negatively influences entrepreneurship, which seems to be empirically confirmed. In a new test presented in subsection 7.6.2, however, the opposite is found: post-materialism positively influences entrepreneurship. The problem is, that both relationships are easily explained and defended, which implies that no empirical result can falsify the theory. Hence, this specific theory of the CED cannot be falsified, which means, according to Popper (1935), who of course has a point, that it is *unscientific*.

The problem is not typical only for this specific example, however, but for the whole of the CED (and possibly even for the whole of social science). The general theories are too vague to test and (even) the more specific theories often include enough external influences, loopholes and other escapes to explain why negative test results are not a refutation. Hence, the CED (and its many theories) are irrefutable and therefore unscientific.

Thirdly, for every increase in detail there is a corresponding increase in complexity. For every theory there is number of more specific theories, some of which seem to be confirmed while others are refuted, hence, a claim that $\Delta\mathbf{B}_X \Leftrightarrow \Delta\mathbf{M}_Y$ may, after testing of more specific theories (theories on the relationships between subsets of \mathbf{B}_X and \mathbf{M}_Y), have to be replaced by $\Delta\mathbf{B}_{X1} \Rightarrow \Delta\mathbf{M}_Y \Rightarrow \Delta\mathbf{B}_{X2}$ (in which case $\Delta\mathbf{B}_X \Leftrightarrow \Delta\mathbf{M}_Y$ still would be true, but not very useful). Similarly, summarising the empirically confirmed theories in a single theory results in something like:

$$\mathbf{T8.3} \quad [\Delta\{\mathbf{M},\Phi\}_{\text{SNT}} \overset{w}{\Leftrightarrow} \overset{s}{\Delta}(\mathbf{M}-\mathbf{M}_{\text{SNT}})] \Rightarrow^w \Delta\mathbf{B}_{\text{entrepreneurship}} ,$$

in words: the category of meta-behaviour, behaviour and (other) actual entities related to the way a society deals with nature and natural resources and with their technological possibilities as a means of subsistence influences or (co-)determines and is influenced by other aspects of meta-behaviour and together these two categories influence the level of entrepreneurship. However, focusing in on more specific relationships dramatically changes the picture:

$$\text{T8.4} \quad \Delta\{\mathbb{M}, \Phi\}_{\text{SNT}} \supset \left\{ \begin{array}{c} \Delta\mathbb{M}_{\text{prod}} \Rightarrow \Delta(\mathbb{C} \cup \mathbb{T} \cup \mathbb{N})_{\text{leg.pol}} \\ \Downarrow \\ \Delta\Delta\mathcal{V}(\mathbb{B}_{\text{PCD}}) \Leftarrow \Delta\mathcal{I} \\ \Downarrow_s \quad \quad \quad \Uparrow \\ \Delta\mathcal{V}(\mathbb{B}_{\text{PCD}}) \Rightarrow^s \Delta\mathcal{N} \\ \Delta\mathbb{B}_{\text{entrepreneurship}} \stackrel{w}{\Leftarrow} \end{array} \right\} \subset \Delta(\mathbb{M} - \mathbb{M}_{\text{SNT}}) ,$$

in which $\} \subset \Delta(\mathbb{M} - \mathbb{M}_{\text{SNT}})$ means that the categories before $\}$ are subsets (\subset) of $\Delta(\mathbb{M} - \mathbb{M}_{\text{SNT}})$ and $\supset\{$ has a similar meaning but with a reversed (right to left) direction. An increased focus on more detailed theories would even further complicate the picture. (T8.4 could be translated in ordinary language, but this would require half a page at least and would not make it any clearer.)

T8.3 and T8.4 could be interpreted as syntheses of the CED; however, as pointed out above, a further focus on detail results in a further complicated theory. For every theory, there is a set of more detailed theories that are not simply copies of the more general theory they are special cases of. Hence, whether categories are (causally or otherwise) related may be primarily dependent on what phenomena they comprehend. In other words, whether culture and economy are related is dependent on what exactly these concepts mean in a theory. Moreover, as shown before, seemingly causal relationships may in fact be conceptual rather than causal (see also § 7.7.2).

All of this implies that:

- (1) whether there is a relationship between categories is partly dependent on categorisation, and hence, is a partly conceptual question; and
- (2) the nature of the relationship (if there is one) *may* be conceptual rather than causal;
- (3) therefore, studying (theories and/or relationships of) the CED is conceptual analysis.

Of these points, the second thus far received the least attention. The next subsection deals with the question which types of seemingly causal relationships are conceptual and how this affects the CED.

8 / 3 / 2 / further thoughts on behaviour and meta-behaviour

In this and preceding chapter(s) it was repeatedly suggested that the relationship between the opposing and interacting elements in different theories of the CED may be more of a conceptual than of a causal nature. This subsection further investigates this suggestion and its implications for the CED and the synthesis thereof.

In terms of behaviour and meta-behaviour, the many theories of the CED distinguished, formalised and tested in chapter 7 are all special cases of three fundamentally different general forms:

T8.5 $\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{B}_y$,

T8.6 $\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{M}_y$, and

T8.7 $\Delta\mathbb{B}_x \Rightarrow \Delta\mathbb{M}_y$.

The possible nature(s) of the relationships may differ between these general forms, which may be illustrated by assessing the different implications of the assumption ξ that $x = y$. The first, T8.5(ξ), is true by definition:

D8.1 $\forall x [\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{B}_x]$,

as in chapter 5 meta-behaviour was defined as everything social that influences or determines behaviour, which was formalised as D5.1 ($\forall x[\Delta\mathbb{M} \Rightarrow \Delta\mathbb{B}]$). D8.1 is D5.1 in context x . As D5.1 was non-contextual, including context does not change its truth-value, therefore: D8.1.

The effects of ξ in the second and third cases, T8.6(ξ) and T8.7(ξ), are very different. In T8.6(ξ) the causal relationship dissolves as cause and effect would be related by identity rather than by causality. T8.7(ξ), on the other hand, is not fundamentally different from T8.7. The relationship does not change and neither is there a definition similar to D8.1, but with reversed causality, to make T8.7(ξ) true by definition.

In conclusion: T8.5(ξ) is a causal relationship that is true by definition; T8.6(ξ) is a relationship of identity rather than causality; and T8.7(ξ) is a possibly causal relationship that may be true depending on empirical confirmation. Hence, T8.5(ξ) and T8.6(ξ) are conceptual and T8.7(ξ) is empirical; or, in Kantian terms (see §2.2.1), T8.5(ξ) and T8.6(ξ) are analytic and T8.7(ξ) is synthetic.

If it is further assumed that (assumption ζ) all theories of the general forms of T8.5 and/or T8.6 are necessarily conceptual and if the symbol \sqsubset is defined such that:

D8.2 $\forall x,y [x \sqsubset y \leftrightarrow (\mathbb{M}_x \sqsubset \mathbb{M}_y \wedge \mathbb{B}_x \sqsubset \mathbb{B}_y)]$,

then:

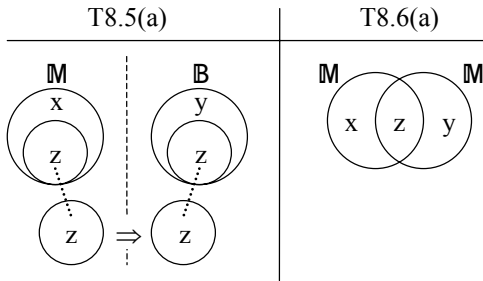
T8.5a $\forall x,y [\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{B}_y \rightarrow \exists z [z \sqsubset x \wedge z \sqsubset y \wedge \Delta\mathbb{M}_z \Rightarrow \Delta\mathbb{B}_z]]$, and

T8.6a $\forall x,y [\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{M}_y \rightarrow \exists z [z \sqsubset x \wedge z \sqsubset y]]$.

In words: if there is a (perceived) causal relationship of the form T8.5, there is a common core to the related phenomena; and if there is a (perceived) causal relationship of the form

T8.6, the related phenomena overlap (see also figure 8.3). An example of the latter case (T8.6a) was given in subsection 7.7.2 where it was explained that the cause and effect of T7.20 ($\Delta \mathcal{I}_{\text{capitalism}} \Rightarrow^s \Delta \mathcal{N}_{\text{alienation}}$) overlap. Alienation is an aspect of capitalism, hence, the relationship is conceptual rather than causal.

figure 8.3: Venn-Euler diagrams of T8.5(a) and T8.6(a)



T8.5a was not illustrated as explicitly before. D8.1 holds that, by definition, entrepreneurial meta-behaviour ($\mathbb{M}_{\text{entrepreneurship}}$) (co-) determines entrepreneurial behaviour ($\mathbb{B}_{\text{entrepreneurship}}$). In chapter 7 it was repeatedly claimed (see §§ 7.2 and 7.3) and/or found that, for example, individualism and post-materialism ($\mathcal{N}_{\text{individualism}}$ and $\mathcal{N}_{\text{post-materialism}}$) are somehow related to entrepreneurial behaviour. T8.5a then claims that there must be an overlap between $\mathbb{M}_{\text{entrepreneurship}}$ and $\mathcal{N}_{\text{individualism}}$ and/or $\mathcal{N}_{\text{post-materialism}}$, $\mathbb{M}_{\text{overlap}}$, and that this overlap causes a type of behaviour $\mathbb{B}_{\text{overlap}}$ that is a subset or aspect of $\mathbb{B}_{\text{entrepreneurship}}$.

Interestingly, most explanations of theories or empirical findings of the form T8.5 conform more or less to T8.5a. Inglehart's claim that post-materialism negatively influences entrepreneurship, for example, is (a.o.) defended by claiming that post-materialists value profit less, while the aim for profit is a defining characteristic of entrepreneurial behaviour and meta-behaviour (see box 8.1).

box 8.1: an example of a T8.5a-like argument

Theory θ claims that:

$$\Delta \mathcal{N}_{\text{post-materialism}} \Rightarrow -\Delta \mathbb{B}_{\text{entrepreneurship}} ,$$

which is defended and/or explained by:

$$\mathcal{N}_{\text{profit-goal}} \not\subset \mathcal{N}_{\text{post-materialism}} , \text{ and}$$

$$\mathcal{N}_{\text{profit-goal}} \subset \mathcal{N}_{\text{entrepreneurship}} \leftrightarrow \mathbb{B}_{\text{profit-goal}} \subset \mathbb{B}_{\text{entrepreneurship}} ,$$

which are definitional statements and:

$$\mathcal{N}_{\text{profit-goal}} \Rightarrow \mathbb{B}_{\text{profit-goal}} ,$$

which is true by definition (D8.1), and which implies (or at least seems to) that θ is true.

The problem with an argument like that in box 8.1 is that other subsets of the supposed cause and effect may be differently related. In contradiction of θ , it was shown in subsection 7.6.2, for example, that the self-expression aspect of post-materialism may cause self-expressive behaviour by means of self-employment, which is an aspect of entrepreneurship (see §§ 7.6.2 and 8.3.1).

Up to this point, it was assumed that all theories of the forms T8.5 and T8.6 are necessarily conceptual (assumption ζ). As all examples of these general forms in the preceding chapter conform to T8.5a and T8.6a, it may be concluded that ζ has been sufficiently verified, which, nevertheless, does not support the necessity assumed in ζ (necessity is a theoretical rather than an empirical claim). Whether T8.5 and T8.5 are *necessarily* conceptual is dependent on an assessment of not- ζ .

If not ζ , then there must be some (possible) cases $\Delta\mathbf{M}_x \Rightarrow \Delta\mathbf{B}_y$ in which x and y are completely unrelated. It seems, however, to be absurd that two phenomena bounded by *completely* unrelated x and y respectively are nevertheless causally related. Moreover, it is quite difficult, if not impossible, to come up with an example because it seems that for every possible x and y some overlap is conceivable. In conclusion: not not- ζ ; therefore: ζ .

While all theories of the first two forms are conceptual, those of the third (T8.7) are not. T8.7 is a special case of:

T8.7a $\Delta\Phi \Rightarrow \Delta\mathbf{M}$,

which claims that meta-behaviour is dependent on the set of actual entities. In other words: rules, ideas, values, institutions, concepts, and so forth are influenced (if not co-determined) by (the conditions of) the world or reality they are formed in. Or in evolutionary terms: changing (or different) natural conditions lead to 'a shift in survival strategies' (Inglehart 1997, p. 66). A more or less similar point was, of course, made much earlier by Vico (1725/44; see §§ 3.2.2 and 7.2.2). Most examples of T8.7(a) specified in chapter 7 focus on the influence of wealth on values and institutions.

Rather than T8.3 and T8.4 in subsection 8.3.1, T8.5(a) to T8.7(a) can be regarded the synthesis of the CED. By implication, the CED is a mix of conceptual confusions (T8.5(a) and T8.6(a)) and 'shifts in survival strategies' (T8.7(a)). Not surprisingly, it was the latter part that seems to be empirically confirmed most consistently.

8 / 3 / 3 / summary, synthesis

Three strongly related conclusions were drawn in this section. Firstly, it was found that most theories of the CED (and the CED as a whole) are very broad and vague and allow many loopholes and exceptions making falsification virtually impossible (even if testing is possible, negative results generally do not lead to falsification). Hence, the CED is unscientific.

Secondly, for every increase in detail there is a corresponding increase in complexity. Every increase of focus on a specific theory reveals a number of 'sub-theories' that may have very different causes and effects and may even work against each other.

And thirdly, it seems that, broadly speaking, there are two types of theories in / of the CED: (1) theories that are misunderstood conceptual overlaps (T8.5(a) and T8.6(a)); and (2) theories on the (external) conditions of (types or aspects of) meta-behaviour (8.7(a)). This last (third) conclusion may be regarded the *synthesis* of the CED.

The synthesis implies that empirical findings do not necessarily point at real world facts; they may be artefacts produced by conceptualisation and measurement. 'Eyes and ears are bad witnesses to men if they have souls that do not understand their language' (Heraclitus 6th century BC, fragment 107).

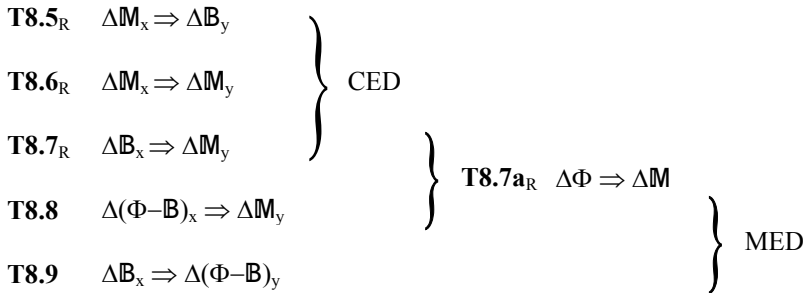
8 / 4 / science, society and the CED

In section 2.5 a dialectic was defined as a pair of concepts (or phenomena) that are conceived to be binary opposites but that do in fact interact and/or overlap. Hence, a dialectic is a kind of pseudo-dichotomy. The culture - economy *dichotomy* is a *dialectic* because its concepts overlap and the phenomena associated interact. The conceptual overlap, the fact that there are no discrete and independent spheres of reality labelled "culture" and "economy" (see chapters 3 to 5), implies that the culture - economy dichotomy *as a dichotomy* is a misconception. Moreover, the interactions or interrelationships seem to be the product of the conceptual overlap rather than of social 'laws'. As shown above (§ 8.3.2), many of the assumed relationships between culture and economy are conceptual rather than causal.

The birth and development of the social sciences is interwoven with the history of the culture - economy *dialectic* (CED) (see § 3.2.2). Moreover, the translation of the CED in the meta-behaviour - behaviour framework seems to be a subset of (or even coincides with) social science. In section 8.3, three types of CED relationships were distinguished: T8.5 to T8.7 (repeated below). These three types of relationships are the same basic problems studied in most of the social sciences and most social science questions and problems can be translated as special cases of these three types of relationships or combinations thereof.

(Note that $\Delta B_x \Rightarrow \Delta B_y$ is the only possible combination missing in T8.5 to T8.7. $\Delta B_x \Rightarrow \Delta B_y$, however, is necessarily mediated by some ΔM and is hence a combination of T8.7 and T8.5 of the form: $\Delta B_x \Rightarrow \Delta M_z \Rightarrow \Delta B_y$.)

The exception to this rule is classical geography, which studied the man - environment dialectic (MED). Formalising both directions of the MED as T8.8 and T8.9 (in which $\Phi-B$ is the set of actual physical, non-behavioural entities, the (physical) geographical environment) and adding these to the list results in the following five types of relationships studied by social science:



The whole of social science studies T8.5 to T8.9. Hence, social science is the combination of the CED and the MED. The conclusion that the CED is at least partly the result of conceptual categorisation rather than of real (social) world phenomena (see § 8.3.2) and other findings of this study may, therefore, have implications for social science. The final sections of this chapter (and this book) present some considerations on the (probably) most important implications of this study for social science and its methods.

This section focuses on geography (§ 8.4.1), social science and its methodology (§ 8.4.2) and the application of social science in public (regional economic) policy (§ 8.4.3). Section 8.5 deals with disciplinary, conceptual and other boundaries, and with the notion of free choice, which seems to be fundamental to many approaches in social and political science. Section 8.6, finally, summarises the findings of this concluding chapter and presents some closing comments.

8 / 4 / 1 / reinventing geography

In the introduction to this section it was stated that social science studies five types of relationships: three types of CED relationships and two types of MED relationships. In practice, however, the man - environment dialectic (MED) receives fairly little attention, certainly not since the death of classical geography. Social science is dominated by the first three relationships. Hence, in practice, social science – more or less – coincides with the CED.

The MED was the defining subject of (classical) geography (see § 3.6), but was effectively removed from the discipline by two revolutions. The quantitative revolution of the 1950s changed geography into a kind of sterile social geometry and the mainly Marxist (counter-) revolution of the 1970s introduced a new conceptual and theoretical framework. The first of these revolutions destroyed the MED, the prime subject and defining characteristic of classical geography; the second removed the rubble (left by the first) and replaced this by the fashion of the day. Rather than returning the field to its conceptual and theoretical roots, through (a.o.) Marxism, a new conceptual framework was introduced: the CED.

Classical geography was effectively dead by the 1970s and what replaced it is better labelled "spatial sociology" and/or "spatial economics" than geography. Since the 1970s geographers mainly occupied themselves with applying and 'spatialising' or 'regionalising' sociological and economic theories. Modern geography is no longer concerned with T8.8 and T8.9 but with regionalised versions of T8.5 to T8.7. Original theoretical contributions to social science by *post-classical* geographers seem to be extremely rare. In fact, it may be the case that Harvey's (1989) theory on post-modernism and the socio-spatial effects thereof is the only – more or less – original geographical theory with some impact (although one might wonder whether this is really a geographical theory).

Modern (or post-classical) geography seems to suffer from fuzzy concepts, scanty evidence and limited policy relevance (*e.g.* Markusen 1999; Rodríguez-Pose 2001). One could, therefore, be inclined to conclude that for a geographer, there is not much in his or her discipline to be proud of. If it were not for the centuries of geographical thought before the two revolutions mentioned above, this conclusion would be justified. However, geography is a far richer field than the last fifty years of mathematical abstractions and confused theoretical poverty suggest (see also § 3.6). Geography as the study of the MED includes many eminent scientists and philosophers such as Hippocrate, Aristotle, Albertus Magnus, Montesquieu, and Ritter (see § 3.6.1). The research program these scientists and philosophers contributed to, the MED, however, has experienced little development in the last half century (see § 7.5.5). There is plenty to be proud of for a geographer as long as one looks back far enough.

The fact that geography abandoned the MED (T8.8 and T8.9) and focused on the CED (T8.5 to T8.7) instead implies that a part of social science is now left relatively neglected. (A few social scientists are still working on the MED (see § 7.5.5), but these rarely come from a geographical background.) Whether the contributions from modern geography to the study of relationships of the types T8.5 to T8.7 are very relevant is, moreover, doubtful (*e.g.* Markusen 1999; Rodríguez-Pose 2001).

Geographers should choose whether to continue the field as a kind of spatial(-ised) sociology or economics with little impact and little social (and scientific) relevance, or to reinvent the field, to reclaim its (proper) domain by returning geography to its theoretical and conceptual roots: to study how the geographical environment influences and determines social structure (meta-behaviour) (and how social behaviour changes the environment). This does not mean that geography should return to theories about the influence of climate

on cultural development (e.g. Huntington 1915; see also § 3.6.1), although there is – in principle – little wrong with researching this, but it means that geographers should focus on how geographical features and differences, how the natural and the socio-spatial environment, and how distance and space influence institutions, concepts, values, ideas, and the like and, through these, behaviour. It is, for example, not regional difference itself that should be studied by geography, but the geographical causes (and effects) of regional difference.

The MED is an essential part of social science. It is this part of social science that is the defining subject of classical geography. Geographers, however, have left this part lying fallow for too long. There is a world to *regain* for geography.

8 / 4 / 2 / social science as empirical conceptual analysis

Of the five types of relationships studied by social science, two are conceptual rather than causal. Hence, T8.5 ($\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{B}_y$) and T8.6 ($\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{M}_y$) should be studied by means of conceptual analysis. The conceptual structure of these relationships was explained in T8.5a and T8.6a, which claimed that the poles of a T8.5-type relationship have a common core and that the poles of a T8.6-type relationship overlap (see § 8.3.2 and figure 8.3).

Conceptual analysis involves more than specifying definitions. Fries and Nelson, for example, argued that conceptual analysis uncovers implicit or hidden presuppositions and meanings (Yolton 1961; see also § 2.2.2; a more or less similar argument for definitional analysis was forwarded in Whitehead & Russell 1910-3). Having and using a concept does not necessarily mean that we can analyse it by theoretical means alone. Empirical analysis may help sort out the essential from the trivial. Empirical analysis may contribute to the uncovering of these implicit or hidden presuppositions and hence to conceptual clarification.

The argument presented in box 8.1 may be considered an exemplar for social science reasoning: some empirical relationship is found which is explained by assuming a common conceptual core (or overlap). Only rarely, however, is the scientist concerned aware that he or she is practising conceptual analysis and only rarely can the analysis pass any standard of *decent* conceptual analysis.

Nevertheless, social science could be regarded as a kind of *empirical conceptual analysis*. For example, consider the relationship between post-materialism and self-employment: $\Delta\mathbb{M}_{\text{post-materialism}} \Rightarrow \Delta\mathbb{B}_{\text{self-employment}}$. According to T8.5a, there is some subset \mathbb{M}_z of $\mathbb{M}_{\text{post-materialism}}$ that is by definition D8.1 causally related to some subset \mathbb{B}_z of $\mathbb{B}_{\text{self-employment}}$. The nature of this subset is, however, not necessarily clear and cannot be revealed by theoretical analysis alone because *none* of the sets (or phenomena) mentioned in this example is internally homogeneous and/or unambiguous. There are many entities and effects and these may contradict each other.

If z (the link between post-materialism and self-employment) is the aim for profit, post-materialism should influence self-employment negatively; if z is a preference for

independence and self-development on the other hand, post-materialism would probably promote self-employment. The problem is that z is both and much more, and that it is not at all clear which aspects and effects are more important (in which situations). Empirical analysis may help to reveal this. In the case of this example, however, it was found that on the (inter-) national scale the relationship between post-materialism and self-employment was negative, while it was positive on the regional scale. Hence, empirical analysis did not result in a final answer.

In many cases, as in this example, relationships are assumed and/or researched between internally heterogeneous categories, between concepts and phenomena that are too vague and too broad. As shown above (see § 8.3.1), increasing the level of detail will increase the complexity of the relationship or theory, resulting in a complex network of contradictory and/or amplifying effects.

Conceptual and empirical analysis may complement each other in clarifying the categories and relationships of (or in) the theory. The broader the categories, however, the more empirical analysis is needed and the more complicated the conceptual analysis will be.

The primary task of social science is to discover (or better: ‘uncover’) patterns and rules (etc.): the elucidation of meta-behaviour (e.g. Winch 1958). Explaining social behaviour is specifying meta-behaviour. However, meta-behaviour is not directly observable. The epistemological argument for behaviourism holds that we can only observe behaviour (actions or behavioural events) and that, therefore, social science should be a science of behaviour. Hence, social science is left with no option but to study behaviour to uncover meta-behaviour that guides behaviour. (see also §§ 5.2.1 and 6.2.1)

Since patterns p were defined in subsection 5.2.2 (see figure 5.3) as:

$$\mathbf{D8.3} \quad \forall m [m = p \leftrightarrow \exists \varphi, b [\text{rlif}(m, \varphi, b)]]$$

(a pattern p is a meta-behavioural entity m that suggests or prescribes action / behavioural event b in case of condition φ), the above implies that social science should proceed by classifying and counting behavioural events b (types of \mathbb{B}) and correlating these to data about the conditions φ , the environment and properties of the actors involved. This is an demographical or epidemiological approach. Applying it to economics or economic geography could, for example, result in a demography of firms. As a research strategy, demography of firms involves a theoretical or conceptual and an empirical part. The first, theoretical or conceptual part focuses on classification and conceptualisation of events and objects (firms) (e.g. Struijs & Willeboordse 1988; 1995; Brons 2001; 2003). The second, more empirical or practical part models population change (e.g. van Wissen 1997; 2000) and/or counts, correlates and explains events (e.g. Birch 1979; van Dijk & Pellenbarg (eds.) 1999).

Social science is (and should be) a mix of conceptual and empirical analysis. The two complement each other. Conceptual analysis without empirical research is sterile and often ignores vital information that may result from empirical analysis. Empirical analysis without conceptual analysis on the other hand often results in ill-conceived operationalisations, theoretical confusion and misconception, and limited (scientific) relevance. In other words: conceptual analysis, ontology or statistical classification (which are similar strategies to solve similar problems; see chapter 2) are (or need to be) an essential part of social science.

8 / 4 / 3 / culture, entrepreneurship and regional policy

The social and political relevance of the CED is most obvious in regional policy (RP). Hence, some of the findings of this study may be relevant to RP. The goal of RP generally is to improve the economic situation of underdeveloped regions within a country (or group of countries such as the European Union). The prime focus tends to be on fighting unemployment. Many theories of the CED assume that entrepreneurship (either self-employment, innovation, or both) positively influences employment growth (see § 7.3), and hence, many regional policies attempt to promote entrepreneurship.

Cultural difference may be important in or to RP. Although no consistent relationships between culture and economy were found, cultural differences, which include differences in economic practices, institutions, and so forth, may influence the success or failure of a regional policy. A policy to promote entrepreneurship in a region where this is traditionally valued negatively, for example, is doomed to fail.

There is a more fundamental problem associated to this kind of policy, however: the belief that entrepreneurship promotes economic growth may be just that: a belief, a myth rather than reality. There is no consistent empirical evidence that levels of new firm formation, self employment and or innovation positively influence economic growth (§ 7.4.3). On the other hand, wealth does seem to influence the levels of innovation and self-employment. Hence, an RP that focuses on the promotion of entrepreneurship does not seem to be particularly helpful. (Unfortunately, what kind of regional policy would work is difficult to say and the answer surely cannot be found in this book.)

RP is the product of a preference for equality. This preference for equality, however, also influences the methods of RP. Generally a single policy or a small number of policies are (equally) applied to very different regions (in the European Union, for example, the same policies have been applied in parts of Spain, Ireland and Sweden). Fighting inequality by assuming equality in needs, however, does not seem to be the most obvious solution.

Among many other things, culture influences the economy. The concepts may be problematic and the relationships may be conceptual rather than causal, but there *are* relationships nevertheless. Different regions may have different cultures that may differently influence different aspects of the economy and respond differently to different

policies. RP should, therefore, be based on difference, rather than similarity. Each region or culture has its own strengths and weaknesses to exploit and to improve upon. Regional economic policies should take these strengths and weaknesses into account rather than try to fit a general system to very different regions.

8 / 4 / 4 / summary

There are five basic types of relationships studied by social science. These are the three relationships of the CED distinguished in section 8.3 (T8.5 to T8.7) and the two relationships of the MED (T8.8 and T8.9). The focus, however, tends to be on the first three relationships. By implication, a part of social science, the MED, is relatively neglected. The MED was originally the subject of (classical) geography, but in the second half of the 20th century, this discipline transformed into a 'spatialised' and/or 'regionalised' sociology and economics. Geography has contributed very little to social science ever since. The limited relevance of modern geography and the fact that its original subject is left fallow argues in favour of a return to the MED, a return to the *geographical* explanation of regional difference, a return to the study of relationships between people and their environment(s).

As the study of (social) behaviour, social science attempts to elucidate meta-behaviour. This means that social scientists study behaviour to uncover meta-behavioural entities that explain the behaviour studied. This is (and/or should be) done by means of a combination of conceptual and empirical analysis. Moreover, of the five types of relationships of social science in general, two are conceptual rather than causal. Hence, these relationships should be studied by means of conceptual analysis. Conceptual analysis in social science should, however, in many cases be supplemented by empirical analysis to distinguish essential from trivial characteristics of concepts, categories and phenomena.

Regional policies are at least partly based on social science. Many regional policies are related to CED theories on culture, entrepreneurship and economic growth. No consistent relationship between entrepreneurship and economic growth was found, however. Moreover, regional policies insufficiently deal with regional cultural difference. Although culture does not necessarily influence culture directly and/or measurably, it may influence the success or failure of regional policies.

8 / 5 / boundaries, anarchism and free choice

According to Comte (1830-42), science progresses through three stages: theological, metaphysical and positive. In the theological stage the world experienced is explained by reference to supernatural forces. In the metaphysical stage explanation is dependent on

abstract concepts and speculation. Only in the third and final stage, positive science is substituted for superstition and metaphysics. Comte claimed that most of the sciences had advanced to the positive stage. The main exception was sociology, which was founded – as a scientific discipline – by Comte himself. Comte hoped that the new discipline would progress through the stages quickly, but more than one-and-a-half centuries later, the social sciences still do not seem to have passed the metaphysical stage. (Orthodox economics with its belief in markets as 'invisible hands' seems even to be lingering in the first stage.) Theories of culture, economy and entrepreneurship, and the social sciences in general are infested with myths, abstract concepts without real-world counterparts and petrified contingencies. It seems that many of our beliefs and perceptions are based more on myth than on reality.

Besides the notions of "culture" and "economy" and many theories of the CED itself, two of the most persistent (types of) myths are *boundaries* and *the myth of free choice*. Boundaries play an immensely important role in (social) science, in the CED and in our lives. To define is to delimit, to draw boundaries around the proper usage of a concept (Suppe 2000; see also § 2.2.3). Boundaries are drawn between 'us' and 'them', between groups, between cultures and between regions, and between scientific fields. This study dealt with boundaries repeatedly, although rarely explicitly.

In section 5.2 it was explained that choices (for behavioural events, acts or actions) are determined in an interaction of reason, will and habit. The latter two are the product of reason, natural drives and culture; the former is influenced by culture through perception. In other words, choice is determined by (human) nature, culture and/or reason. If choice is determined, how can it be free?

This section deals with these two myths. Subsection 8.5.1 focuses on the phenomenon of boundaries and their effects; subsection 8.5.2 assesses the idea of free choice in relation to the behaviour - meta-behaviour framework proposed in chapter 5.

8 / 5 / 1 / against all boundaries: a plea for anarchism

In its most common usage, the concept of "boundary" denotes a dividing line between regions or countries. As a scientific concept, however, it has far broader meaning. Boundaries are the dividing lines between or the *limits* of classes. (Note that regions are spatial classes.) The first attempt to define "limit" was probably Aristotle's:

'Limit' denotes the last point of anything, i.e. the point beyond which it is impossible to find any part of it, but within all its parts are found. (...) It is clear, then, that the word 'limit' has as many senses as 'beginning'; more senses, in fact, for every beginning is a limit but not every limit is a beginning. (Aristotle 4th century BC, § Δ.17)

All classes are limited; all classes have boundaries. However, the nature of boundaries differs between different types of classes. Spatial classes (regions), social classes (groups), intensional and extensional classes (aspects of concepts; see §§ 2.2.3 and 2.7.1 and figure 4.1 in § 4.4), and mathematical classes (sets) all have very different types of boundaries.

Boundaries can be either *fuzzy* or *crisp* (they can have breadth or not). Fuzzy boundaries imply fuzzy class membership and vice versa and the same is true for crisp boundaries and crisp class membership. In mathematics, lines and boundaries do not have breadth. In social reality, however, boundaries (and, therefore, class-membership) tend to be fuzzy. The fuzziness of spatial (and social) spatial boundaries is often related to conceptual (intensional and/or extensional) boundaries:

The reason why it's vague where the outback begins is not that there's this thing, the outback, with precise borders; rather there are many things, with different borders, and nobody has been fool enough to try to enforce a choice of one of them as the official referent of the word 'outback'. (Lewis 1986, p. 212)

Concepts were defined in subsection 2.7.1 as ordered sets of term \mathcal{T} , meaning \mathcal{M} , and sets of related concepts \mathcal{O} , \mathcal{S} and \mathcal{H} :

D2.5_R $\mathcal{C} =_{\text{def.}} \langle \mathcal{T}, \mathcal{M}, \mathcal{O}, \mathcal{S}, \mathcal{H} \rangle$,

hence, concepts are classes of classes and therefore are limited by boundaries on multiple levels. Generally, the boundaries of a concept determine the range of its applicability in different times and contexts (which are themselves bounded) (*e.g.* Leibniz 1684; see also § 2.2.1). Like all boundaries, conceptual boundaries can be either fuzzy or crisp. Whether boundaries of meaning and reference (intensional and extensional boundaries) are fuzzy depends on the specific concept and the theory of meaning (see § 2.2.3) adhered to. Intension and extension of classical concepts are crisply bounded, for example, and intension and extension of prototype concepts are fuzzily bounded. The boundaries of the sets of related concepts \mathcal{O} (linguistically, theoretically and ontologically related concepts), \mathcal{S} (semantically related concepts) and \mathcal{H} (historically related concepts) are necessarily fuzzy as the degree of (fuzzy) set membership in all of these sets is dependent on the strength of the relationship.

Boundaries, whether fuzzy or crisp, are not *given* entities but are constructed. The idea of 'the myth of the given' was introduced by Sellars (1963; see also § 2.2.1) to refer to the idea of an intrinsically basic language. According to Sellars, there is no such thing. There are no final definitions or translations, no definite boundaries between concepts and no *aterrae veritates* (Nietzsche 1878; see also § 5.1). Concepts and categories and the boundaries between them are imposed and contingent classifications of reality: 'We dissect nature along lines laid down by our native languages. (...) We cut nature up, organise it into

concepts, and ascribe significances as we do' (Whorf 1956, p. 213; more fully quoted in § 2.1.1; see also Goodman 1972; Davidson 1974; Putnam 1981; and § 2.2.1). Hence, concepts cannot be true or false, but can be practical or impractical and extremely misleading. The fact that a certain concept or category bounds a part of reality (or our perception thereof) does not necessarily mean that this part has any relevance *as a distinct part* in reality. The fact that we have a concept for something does not necessarily mean that this something exists independently, discretely and/or continuously. The fact that we perceive a boundary between kinds or categories does not deny the existence of borderline cases.

There are no given distinct spheres of reality and, hence, no boundaries between them. There is no economy; there is no culture. These are mere concepts applied to 'a life that in its original coming is continuous' (James 1909, p. 235; see also § 5.1). We perceive, classify and remember reality through our changing, contingent language. Language provides the blinkers that guide and limit our thought and perception (see also § 2.1.1).

Like conceptual boundaries, socio-spatial boundaries are not given, but constructed (*e.g.* Allen, Massey & Cochrane 1998; Paasi 1999). Regionalisation, like all classification, is a human activity, not a natural phenomenon:

Boundaries are complicated, historically contingent phenomena that are concomitantly both contextual social institutions and symbols, and are constituted on various spatial scales in various institutional practices and discourses. (Paasi 1999, p. 680)

With the exception of administrative boundaries, socio-spatial boundaries are extremely fuzzy. Many socio-spatial boundaries, moreover, seem to have little social impact in ordinary spatial experience as boundaries and regions only seem to play a role in spatial cognition on greater distances (*e.g.* Norberg-Schulz 1971). Only when actively enforced, as in the case of many state boundaries, or in case of atypical behaviour, such as long-distance relocation (see § 7.5.1), boundaries seem to be socially important.

Anthropologists and other social scientists dealing with culture generally assume that there are distinct and – more or less – bounded cultural groups: cultures. Maps and measurements of culture, such as (and including) those in chapter 6, however, show that culture is an extremely heterogeneous patchwork independent of scale. Every seemingly homogeneous area that could be perceived as *a* culture shows to be extremely heterogeneous after more detailed measurement.

Cultures then cannot be characterised by *common* norms, values, ideas, concepts, etc. There is no *common* core. For every norm, value, and so forth in a (cultural) group, there are some members who do not adhere to that norm, value, etc. Possibly, cultures can be regarded as family resemblances (see § 2.2.1), although the high level of variation on each socio-spatial scale does not suggest this. Even family resemblances have some kind of common core (in the form of a pool of properties) that cultures seem to lack. A more obvious explanation for

the variation measured is that culture is nothing but the *average of individual* – but socially formed – norms, values, ideas, concepts, and so forth of / in a contingently bounded group. There may be a majority of group members that adhere to this average, but there will always be deviants that are nevertheless classified as members of the same cultural group. Hence, membership of a cultural group and cultural boundaries (see also Brons 2005) are extremely fuzzy. One could even argue that there are no cultural boundaries and therefore no cultures.

Regional boundaries and boundaries between cultural groups then do not represent actual real world differences, but are imposed. Boundaries are acts of power. Administrative (regional) boundaries are imposed by state power; other regional and cultural boundaries are often imposed by socio-cultural leaders or by scientists (*e.g.* Kimble 1951).

Just as regional or cultural classification or boundary setting are acts of power, so is classification in general, although it is often difficult to determine who is in control. In the case of ordinary language conceptualisations of reality, it is the group of language users as a whole who unconsciously control the categorisation and boundary setting of their perception of reality. In social science, on the other hand, it often is the scientist who controls the boundaries between his categories or classes. The boundaries between culture and institutions, for example, if drawn, are drawn by scientists, not by social reality.

As many phenomena relevant to the CED were found to be quantitatively immeasurable and only operationable as nominal variables (see § 7.7.2), these phenomena are dependent on the boundaries between the categories of these nominal variables. Whether a society is alienated or not is not a matter of reality, but of definition, of classification, of boundary-setting.

Social science itself is divided in a number of disciplines. These disciplines and the disciplinary boundaries therebetween are the result of the historical process from which the social sciences originated. The boundaries are reinforced by institutions and concepts. The distinct field of economics, for example, makes sense only if the economy is conceptually distinguished from the rest of social reality. As mentioned above, such conceptual distinctions, however, are not reflective of social reality; social reality is not divided into different (*e.g.* economic, cultural) spheres. The distinction of economics from sociology (or *vice versa*) is based on different perceptions and conceptualisations of reality; not on different aspects thereof. Or, as Wallerstein (1999) claims, none of our existing modes of dividing the social sciences into separate disciplines and separate organisations of knowledge makes sense. Disciplinary boundaries, nevertheless, are sustained (mainly) by the institutions of and in the different social sciences. Although multi- or inter-disciplinarity has become fashionable recently, it is more of a buzzword than actual scientific practice.

Boundaries are epistemological mystifications. Boundaries are expressions of power, not of reality, and should therefore be banned from science (except as an object of study).

Regional, cultural, conceptual and scientific boundaries do not represent real world phenomena, but the categories we, by means of our institutions, impose upon it.

In 1975, Feyerabend published his *Against method*, subtitled: *outline of an anarchistic theory of knowledge*. Feyerabend's work, however, argued for *anarchy* rather than *anarchism* in science. The difference may seem subtle, but it is not. Anarchism is not necessarily against rules; it is against *rule* (e.g. Carter 2000). Anarchism does not strive for anarchy (as this concept is usually understood, with a possible exception for some forms of lifestyle anarchism; see Bookchin 1995), but opposes (differences in) power. An anarchist approach to science is *not without method, but without boundaries* (and without authority).

Boundaries are harmful to science in at least two ways. Firstly, they misrepresent reality; and secondly, they are expressions of power and authority which are among the chief enemies of reason (e.g. Gellner 1992). Hence, a more anarchist attitude towards science and reality is needed. Such an anarchist approach to (social) science:

- (1) is (really) multi-disciplinary by definition as it does not recognise disciplinary boundaries;
- (2) questions all concepts and categories, which implies that every research project should start with conceptual analysis;
- (3) questions all authority, which throws the anarchist scientist back on radical doubt: there is no other authority to the anarchist scientist than reason.

8 / 5 / 2 / the myth of free choice

The second myth to be rethought in this section is the myth of free choice. The main question here is: If choice is determined (by culture, nature and/or reason), how can it be free? The answer given by Spinoza, Kant, Hegel, Marx and many others is that reason is the key to freedom (see § 3.2.1).

Choices made under the influence (or even pressure) of cultural norms and values are *not* free choices, *neither* are actions driven by (human) nature the result of free choice: 'the delirious, the garrulous and others of the same sort think that they act from the free decision of their mind, not that they are carried away by impulse' (Spinoza 1674, p. 391). Contrary to culture and (human) nature, reason is a conscious, individual process. Hence, rational choice – and rational choice alone – is free choice.

As 'men are conscious of their own desire, but are ignorant of the causes whereby that desire has been determined' (Spinoza 1674, p. 390), the unhindered pursuit of some irrational desire is merely pseudo-freedom. Culturally determined behaviour is unfree and by implication, culture is the chief enemy of liberalism, and "religious freedom" is an oxymoron.

Free choice is the result of reason alone. However, reason is limited. Miró Quesada's (1963; see also § 3.2.1) showed that reason as 'la facultad del conocimiento lógico-matemático' (p. 208), as a result of Gödel's (1931) theorem, cannot be *complete*. A rational or logico-

mathematical argument necessarily contains some 'formally undecidable propositions' (Gödel) that are supplied by intuition (Miró Quesada). In other words: rational thought necessarily leaves a gap that is filled with non-rational intuition, which through expectations and desires, is a product of habit, will, culture, and the like. Hence, choice cannot be the product of reason alone and therefore, there cannot be (completely) free choice.

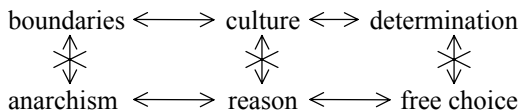
Moreover, the process of rational deliberation is further restricted by the fact that men (1) are not omniscient and (2) are generally incapable of performing the complex calculations necessary for a completely rational choice (e.g. Simon 1957; 1959). A related idea was expressed half a century earlier by Freud in his argument that nothing is irrational from the actor's point of view (e.g. Wallerstein 1999). Human rationality is *bounded* by limited knowledge and limited intellectual capacities (Simon) and what is a rational choice is dependent on *his* knowledge and *his* capacities (Freud). The theory of bounded rationality reinforces the conclusion that all choice is (necessarily) co-determined by unreason (culture and nature) and that therefore, free choice is a myth. (Although choice cannot be free, it could be argued, however, that the *more rational* a choice, the *less unfree* it is.)

If choice is necessarily unfree, many theories in social and political science are built on myth. The extreme example of orthodox economics, in which some kind of Spinozian free man, the *homo economicus*, who is perfectly rational, perfectly free and omniscient, serves as a model for man, immediately springs to mind. There are, however, many other fields, theories and disciplines in political science and philosophy, in ethics and in law and in the social sciences which are based on the idea of free (and/or rational) choice. (This problem is not further pursued here as it would require an extensive research project of its own.)

8 / 5 / 3 / against culture: summary and conclusion

The two myths dealt with in this section are not completely unrelated as shown in figure 8.4. The problems of boundaries versus anarchism and of determination versus free choice are strongly related to the culture - reason dichotomy, which is a branch of the same tree the CED sprung from (see §§ 2.5.3 and 3.1).

figure 8.4: *boundaries and choice*



Boundaries are inseparably bound to categorisation and are enforced and sustained by institutions (power). Hence, boundaries are cultural or conversely *culture is boundary setting*. By implication, culture leads to a misrepresentation of reality, to epistemological

mystification. Therefore, culture hinders science. Moreover, culture is unreason, culture is unfreedom. Culture interferes with rational thought both indirectly, by misrepresenting reality, and directly, by influencing decisions. As such, culture is not only harmful for science, which is dependent on reason, but also for freedom. As Gellner (1992) puts it (somewhat bluntly): 'Reason is *purification*. By contrast, culture is corruption-on-earth' (p. 55).

However, we cannot do without classification, without language; hence, scientific anarchism is necessarily limited. Conceptual anarchism as a research strategy (*question* all concepts) may be useful, the complete *rejection* of all concepts, however, would make science and even communication itself impossible. Like anarchism, reason, and therefore, free choice, are limited, albeit for different reasons. Hence, we are at the mercy of Gellner's 'corruption-on-earth'. As scientists, we have no choice but to fight unreason, knowing that this is a fight that cannot be won.

8 / 6 / dissolution

The research project that resulted in this manuscript set out to answer a number of questions on the history, meaning and implications of the culture - economy dialectic (CED (see § 1.2). The main research question was not so much a question about actual cultural influence on the economy or vice versa, but about what it means to ask such a question. To answer this question, a four-part research strategy was proposed consisting of: (1) comparison and analysis; (2) a review of (dis-)confirmation; (3) synthesis; and (4) an assessment of implications. Parts 1 to 3, however, required conceptual analysis and the construction of some kind of common language and/or a set of translation rules. As a consequence hereof, the CED was studied on three different, but not independent, levels: (1) conceptual (chapters 3 to 5); (2) theoretical or relational (chapters 3 and 7); and (3) meta-theoretical (chapters 5 and 8). This final section reviews and comments upon the main findings of these three levels. Subsection 8.6.1 mainly deals with the conceptual level: with conceptual history and social ontology. The relational level, focusing on the theories of the CED and their empirical (dis-)confirmation, is reviewed in section 8.6.2. Methodological, philosophical and other meta-theoretical issues, mainly dealt with in this last chapter, are reviewed in subsection 8.6.3. Subsection 8.6.4, finally, concludes this study.

8 / 6 / 1 / the *trialectic*

In section 2.5 and chapter 3, a series of dichotomies and dialectics were introduced and explained. The CED was shown to be related to a number of other pairs of concepts including "reason" - "passion" (§ 3.2.1), "civilisation" - "culture" (§ 3.4.1), and "man" -

"environment". Some of these pairs seem to be stages in a development illustrated, in figure 2.4 (§ 2.5.3), ultimately leading to the CED. In this development, the poles of the dichotomies or dialectics continuously shifted. "Reason" and "passion" were 'socialised' into "civilisation" and "culture" (§ 3.2.2), but with this change, connotations and theoretical foundations and implications also changed.

The culture - nature dichotomy or its geographical counterpart, the man - environment dialectic (MED), was the result of a different branch in the same process. However, in subsection 3.6.1 these two branches (the CED and the MED) were shown to be connected. This was illustrated in figure 3.1, which presented environment, culture and economy (in a triangle) as three separate but related conceptual pairs. It seems that the different dichotomies and dialectics dealt with in this book are part of a more complex *trichotomy* or *trialectic*.

As was shown in figure 3.1, this trialectic, however, cannot be simply represented as a triangle because it includes intermediate and/or combinatory concepts. The concepts of "man" or "society" for example include both culture and economy. Similarly, the concept of "passion" (see § 3.2.1) seems to be an intermediate between or combination of culturally induced preferences and natural drives. On this latter level of individual determinants of behaviour, the trichotomy returned in subsection 5.2.1 as reason, culture and nature.

figure 8.5: *the trialectic*

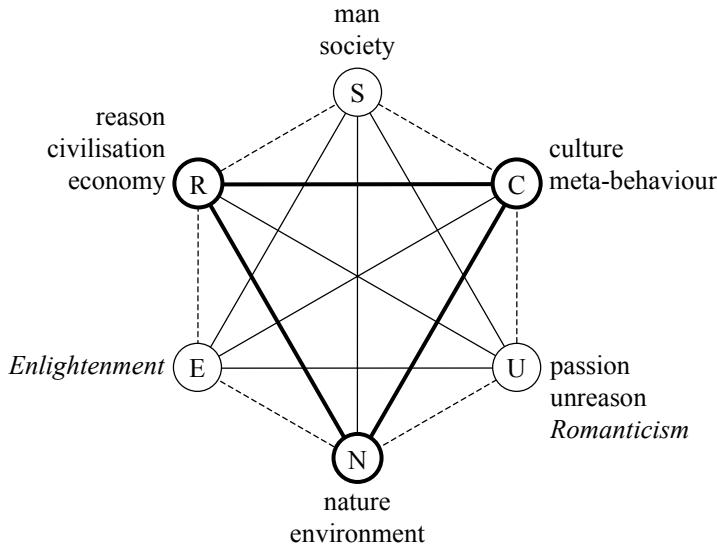


Figure 8.5 represents this reason - culture - nature trialectic or trichotomy in a hexagon shape. This hexagon is basically an expanded triangle to include intermediate or combinatory concepts. For example, S ("man", "society", etc.) is added as a combination of

and/or intermediate between R ("reason", "civilisation", "economy", etc.) and C ("culture", "meta-behaviour", etc.). Dashed lines connect these intermediates or combinations (S, U and E) to the corners of the triangle (C, N, R; elements of the trialectic) they are combinations of (or intermediates in-between).

There are nine solid lines in the figure representing conceptual pairs, dichotomies or dialectics. Four of these may be regarded *major* dialectics, the other five are *minor* dialectics or may even be missing in (contemporary) discourse altogether. The four *major* dialectics are RU, EU, CR, and SN. RU is the reason - passion dialectic (see § 3.2.1); EU represents the antagonism between Enlightenment and Romanticism or Counter-Enlightenment (see § 3.2.3); CR is the CED which originated from the introduction of S in RU and EU; and SN, finally, is the MED and the culture - nature dichotomy. (Note that in the culture - economy dialectic (CED) culture is represented by C and in the culture - nature dichotomy by S. As explained before (in § 2.5.3) these are different concepts of "culture" with an identical label.)

As mentioned, not all lines represent dialectics of the same (historical) importance. The *minor* dialectics are CN, RN, CE, SE and SU. Most dichotomies and theories on the social level which seem to be examples of RN or CN prove to be cases of SN upon closer inspection. As independent dialectics, CN and RN are relatively unimportant. However, they are part of the CNR trialectic (represented by bold lines in the figure) that determines individual human behaviour (see § 5.2.1). Similarly, CE is strongly related to UE. As dichotomies, SE and SU, finally, seem to be virtually non-existent. Rather, the introduction of S in E and U resulted in a Hegelian *Aufhebung* (see § 2.5.2) of SE and SU or S-EU into RC.

Figure 8.5 represents the structure of our perception and classification of (a part or aspect of) reality, but does not represent (that part or aspect of) reality itself. The corners of the figure do not represent ontological categories, but are mere conceptual classifications. Castree (2004) argued against theories that make this mistake: 'there are no such things as "economy" and "culture", ontologically speaking (whether separately or together). Rather, they are two powerful ideas' (p. 206).

While the trialectic (or parts thereof such as the CED and the MED) structures our thought and (scientific) theorising, its ontological relevance is limited. Figure 8.5 does not represent reality (or real-world categories). Hence, theories that are set in these terms may not represent real-world phenomena very well.

Social reality consists of behavioural events or actions and meta-behavioural entities. The latter include labels for, theories on, and patterns of behavioural events (see § 5.2.2). The concepts of the trialectic and the assumed relationships between them are examples of meta-behavioural entities. The concept of "meta-behaviour" is *more or less* synonymous to most interpretations of "culture" (see §§ 4.2-3), but there are no simple equivalents of the other categories of the trialectic. These categories are conceptually (hence, meta-behaviourally) bounded sets of physical, behavioural and meta-behavioural entities (see § 5.2.4).

8 / 6 / 2 / confirmation and falsification

For comparison, evaluation and testing, most theories of the CED were translated in terms of specific (typed) sets of behavioural and meta-behavioural entities (chapter 7). It seems that every possible conceptualisation of culture has somehow been related to every possible conceptualisation of economy. Just as the concepts of "culture" and "economy" are a bewildering and incomprehensible mess (see chapter 4), so is the CED.

A review of empirical tests and some new tests resulted in a small number of conclusions on the theories of the CED. Most tests, however, are based on insufficient data to reach an acceptable level of (dis-) confirmation of the relationships tested. For the direction of causality in assumed relations, there was generally even less evidence. (see also § 7.1.1)

For most of the theories of the CED, especially those relating specific cultural traits to entrepreneurship, no consistent evidence was found. There seems to be only one consistent relationship between a cultural value and an aspect of entrepreneurship: dissatisfaction leads to higher self-employment. The influence of wealth on culture, on the other hand, was empirically shown repeatedly. Multiple test results suggest that an increase of wealth produces an increase of (a) individualism; (b) post-materialism; (c) economic freedom; (d) civil and (e) political rights; and a decrease of (f) competitiveness.

While the first grand theory (see §§ 3.4.1 and 7.2) seems to be partly confirmed, there is very little empirical evidence for the second (see §§ 3.5.1 and 7.3). No consistent effects of cultural values on entrepreneurship were found, and there does not seem to be a consistent and significant effect of entrepreneurship on economic growth. It may be the case that the popular belief in the merits of entrepreneurship is just that: a belief, a myth caused by the position of the entrepreneur as the 'cultural hero' of our society (Hamilton 1957; see also § 7.5.3).

Another popular belief, at least in some economic circles, is that institutions affect economic growth. Empirical tests indeed show some relationships between institutions, such as democracy, the quality of the educational system, and economic freedom and economic growth, but the direction of the causality is generally unclear. In most cases, historical and statistical evidence suggested that the level of economic development of a society determines its institutions (wealth leads to economic freedom; a growing middle class leads to democratisation; and so forth) rather than the other way around. There may be effects of institutions on the economy, but it is very difficult to discern these from the – possibly stronger – effects in the opposite direction.

Interestingly, there were important differences between the findings on the regional scale and those on the (inter-) national scale. Firstly, on the regional scale a strong and positive effect of Protestantism on self-employment was found, which seems to confirm Weber's thesis (§§ 7.3.1 and 7.6.2). On the (inter-) national scale, however, no similar results were found (Kilby 1971; Lynn 1991). The difference may be caused by the fact that national cultural differences overpower religious and other types of difference, which results in the

disappearance of some cultural effects on the (inter-) national scale (Inglehart & Baker 2000). Hence, it may be advisable to study the CED or the effects of cultural values on behaviour in general on the regional rather than the (inter-) national scale.

Secondly, post-materialism seems to have negative effects on the (inter-) national scale and positive effects on the regional scale. Both relationships can be and were explained easily and are not necessarily contradictory. The fact, however, that not just this example, but any negative (or otherwise unexpected) test result for any theory of the CED can be explained without rejecting the theory implies that the theories of the CED are generally infalsifiable and therefore, unscientific (see § 8.3.1).

8 / 6 / 3 / science and meta

Falsifiability is not the only meta-theoretical problem of the CED. An analysis of the types of relationships in section 8.3 (T8.5 to T8.7; see table 8.1) showed that these are more often conceptual than causal. Hence, many of the theories introduced in chapter 7 should be studied by means of conceptual analysis rather than empirical research, although the latter may be a useful instrument in accomplishing the former (see § 8.4.2).

Social science is a study of language as much as it is a study of social reality. Language is important to social science as social reality, and both the perception thereof and social behaviour are strongly related to the concepts we have and use. Whether we choose to perform a certain action is (among others) dependent on whether we have a concept for that action. The trialectic itself would be irrelevant to most of Japanese thought, as there is no Japanese equivalent of "culture" (see § 2.1.1). Whether two 'things' are related is often more dependent on how these 'things' are conceptually bounded than on actual social reality.

By implication, research questions in social science should focus on the concepts used first. Statistical (or other types of empirical) analysis is useless if the researcher uses measures and concepts that are ambiguous or otherwise unclear. Social science should proceed by a three-step methodology:

- (1) conceptual analysis / (statistical) classification / ontology;
- (2) measurement / operationalisation;
- (3) correlation / empirical analysis.

The three types of basic theories or relationships of the CED distinguished in subsection 8.3.2 (T8.5 to T8.7) also are the basic theories (or building blocks thereof) of social science at large (see table 8.1). Theories in the social sciences can be translated into sets of relationships that are subtypes of T8.5 to T8.7. Two more basic theories (T8.8 and T8.9, representing the MED) were studied by classical geography, but seem to be a bit neglected in contemporary social science, especially since geography itself abandoned the MED in favour of the CED (see §§ 3.6 and 8.4.1).

table 8.1: *basic theories, relationships and disciplines*

theory	type of relationship	scientific discipline(s)
T8.5_R $\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{B}_y$	conceptual	sociology, economics, <i>post-classical</i> geography, etc.
T8.6_R $\Delta\mathbb{M}_x \Rightarrow \Delta\mathbb{M}_y$		
T8.7_R $\Delta\mathbb{B}_x \Rightarrow \Delta\mathbb{M}_y$	causal	
T8.8_R $\Delta(\Phi-\mathbb{B})_x \Rightarrow \Delta\mathbb{M}_y$		
T8.9_R $\Delta\mathbb{B}_x \Rightarrow \Delta(\Phi-\mathbb{B})_y \rightarrow$ <i>possibly both</i>		<i>classical</i> geography

Subsection 8.4.1 argued that geography should return to its roots and refocus on the MED, on T8.8 and T8.9. Subsection 8.5.1, however, pleaded for scientific anarchism and against disciplinary boundaries. This may seem contradictory. The point made in the latter section was that boundaries are epistemological mystifications and are, therefore, harmful to science. However, without some classification, and hence, some boundaries, science (and communication itself) are impossible (see § 8.5.3). Conceptual boundaries are necessary to organise our thought and perception. They may be mystifications, but they are necessary mystifications. Similarly, disciplinary boundaries may be necessary to organise science. Hence, disciplinary boundaries are a social rather than epistemological phenomenon; they are artefacts reflecting the origins and history of the different social sciences.

Scientific anarchism questions boundaries, classifications, concepts, authority, and the like. How then can geographers both choose to limit themselves to the study of the MED (T8.8 and T8.9) and be scientific anarchists at the same time? The answer is that they should *not* limit themselves in this (or any other) way (except by reason). Geography should not be *limited* to T8.8 and T8.9 (neither should the other social sciences be limited to T8.5 to T8.6); the MED should be the focus and starting point of geography, not its blinkers or end.

Sociology studies T8.5 to T8.7, but in the case of economics, things are a bit different. Mainstream or orthodox economics does not study T8.5 to T8.7, but mathematically models relationships of the form $\Delta\mathbb{B}_x \Rightarrow \Delta\mathbb{B}_y$, a combination of T8.7 and T8.5 ($\Delta\mathbb{B}_x \Rightarrow \Delta\mathbb{M}_z \Rightarrow \Delta\mathbb{B}_y$) in which \mathbb{M} is considered universal and therefore irrelevant. Orthodox economics is hardly a social science because it does not study social reality and shares more characteristics with political ideology and/or religion (see § 7.5.3) than with the other social sciences. Heterodox economics (including a.o. institutional, evolutionary, behavioural and experimental economics), on the other hand, has much to offer, and indeed continuously transgresses the disciplinary boundaries with geography and sociology.

If all of economics would study T8.5 to T8.7, how then would it be different from sociology? Considering the basic types of relationships or theories (see table 8.1) it seems that there are only two social sciences: sociology (focusing on T8.5 to T8.7) and geography (focusing on T8.8 and T8.9). The difference between them is merely a difference in *focus*, and hence, the boundary between them is extremely fuzzy. All other social sciences are applications of sociology, and sometimes geography, to specific problems, groups, environments, and so on but are not fundamentally different in the types of questions they ask or the types of theories they propose. However, as long as geography continues as a kind of spatial or regional sociology, social science consists only of sociology and a gap. It is up to geography to (re)fill that gap.

8 / 6 / 4 / coda

- 1.1 The concepts of "culture" and "economy" refer to ideas rather than to the world. They represent how we perceive and classify reality, not reality itself.
- 1.2 There are no discrete real-world counterparts of the concepts of "culture" and "economy".
- 1.3 There are sets of entities that could be labelled "culture" or "economy", but these sets are bounded subjectively, contingently and ambiguously.
- 1.4 Subjectively, contingently and ambiguously bounded parts of reality are irrelevant in objective real-world (social) processes and phenomena. Therefore, culture and economy are irrelevant in real-world processes and phenomena.
- 1.5 What is irrelevant to real-world (social) processes and phenomena is irrelevant to the study thereof: (social) science. Therefore, ⁽ⁿ⁾Culture⁽ⁿ⁾ and ⁽ⁿ⁾economy⁽ⁿ⁾ are irrelevant to (social) science.
- 1.6 As scientific concepts, "Culture" and "economy" are misconceptions.
- 2.1 Whether two phenomena are related is often more dependent on how these phenomena are conceptualised, operationalised and measured (or classified) than on real-world relationships.
- 2.2 Culture and economy *seem* to be related because "culture" and "economy" are related, not because culture and economy are related.

- 2.3 As "culture" and "economy" have no discrete real-world counterparts, there can be no real-world relationship between these.
- 2.4 Theories on the relationships between culture and economy are based on misconceptions rather than on real-world phenomena.
- 2.5 Theories on the relationships between culture and economy are misconceptions.
- 3.1 "Culture", "economy" and relationships between culture and economy are misconceptions.
- 3.2 Nothing useful can be said about misconceptions except that they are misconceptions.
- 3.3 'Wovon man nicht sprechen kann, darüber muß man schweigen' (Wittgenstein 1922, § 7).

CONSIDERATIONS AND IMPLICATIONS

