Article

Culture & Psychology

Culture & Psychology
17(1) 31–46

DOI: 10.1177/1354067X10388841
cap.sagepub.com
SAGE

Defining 'the humanities'

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Abstract
The division of knowledge into 'science,' 'social science,' and 'the humanities' is deeply entrenched in ways of thinking prevailing in the English-speaking world and is reflected in many institutional structures. The English word *science*, which excludes not only 'the humanities' but also logic and mathematics, does not have exact equivalents in other European languages. It is a conceptual artefact of modern English and is saturated, so to speak, with British empiricism. There is a pressure on speakers of English to regard 'natural sciences' as a paradigm of all knowledge, or at least all knowledge that modern societies should value and pursue. The semantic changes that the English word *science* has undergone in the last two centuries or so make empirically-based knowledge of the external world seem central to all human knowledge. This paper shows why 'the humanities' constitute a field of inquiry that is fundamentally different from 'science' (and from 'social sciences' modelled on 'science') and yet essential to human knowledge and 'human understanding.' In doing so, the paper draws on the thought of the 18th-century Italian philosopher Giambatista Vico and on the methodology of linguistic semantics, and in particular on the 'NSM' theory of language and thought.

Keywords
British empiricism, Giambatista Vico, NSM semantics, psychology vs. 'science' and vs. 'the humanities', the concept of 'the humanities', the concept of 'science'

Introduction: Could psychology be the missing link?

The division of areas of knowledge into 'science,' 'social sciences,' and 'the humanities' is well established in the English-speaking world. It is not widely agreed, however, what this division is based on. Nor is it always clear where a particular discipline fits in this schema. For example, where does psychology belong?

At my own university, psychology is part of the Faculty of Science. At some other Australian universities, it is part of the Faculty of Arts. At still others, it is

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part of a School, or a Faculty, of Social and Behavioural Sciences. The stated 'Editorial Aims' of the journal *Culture & Psychology* highlight the broad spectrum of subjects which come under psychology and its strong links with other disciplines:

> *Culture & Psychology* addresses the centrality of culture necessary for a basic understanding of the psychology of human beings: their identity, social conduct, intra- and intersubjective experiences, emotions and semiotic creativity. By drawing on diverse theoretical backgrounds, the editorial aim is to provide an international and interdisciplinary forum for scholarly investigations and discussions that will advance our basic knowledge of the self in its historical and cultural contexts. The orientation of the journal is towards formulating new conceptualizations of culture in psychology, together with theoretically relevant empirical investigations. Contributions from anthropology, sociology, education, ethnography, cultural history, linguistics, communication studies and philosophy will further enhance the journal's commitment to interdisciplinary psychology.

The definition of 'psychology' provided by the American Psychological Association's website is equally broad:

> Psychology is the study of mind and behavior. The discipline embraces all aspects of the human experience – from the functions of the brain to the actions of nations, from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, 'the understanding of behaviour' is the enterprise of psychologists.

The word 'scientific' does feature in this definition, but so does the word 'mind' and the phrase 'human experience.' On the whole, however, the definition of the American Psychological Association, with its final emphasis on 'the understanding of behaviour,' appears to be tilted towards science, whereas that of *Culture & Psychology*, with its emphasis on 'the centrality of culture' and its references to 'experience,' 'emotion,' and 'self,' tilts towards the humanities.

The very fact that psychology cannot be readily pigeon-holed as belonging to this or that branch of knowledge highlights the importance of approach and perspective, alongside the subject-matter, in the division of knowledge into 'science,' 'social sciences,' and 'the humanities,' entrenched in ways of thinking prevailing in the English-speaking world and reflected in many institutional structures.

There is also a growing trend in psychology not to restrict itself to one perspective (say, one focussing on 'brain' as opposed to 'mind,' 'culture,' and 'experience,' or vice versa), and to seek dialogue, interaction, and even cooperation between different perspectives, methodologies, and disciplinary traditions. The emergence of new journals such as, for example, *Emotion Review*, *The Journal of Positive Psychology*, *Theory and Psychology*, and the *Journal of Social and Evolutionary Psychology* bears witness to this widening of the horizons and the growing

recognition of a need for a multidisciplinary approach to the study of people, with their inextricably connected minds, brains, and cultures. A rapprochement between psychology and linguistics is particularly noticeable and, arguably, particularly fruitful. It is in this context that the present paper situates itself (see also Wierzbicka, 2005, 2009a, 2009b).

The different status of 'science' and 'the humanities' in contemporary English

Most speakers of English assume they know what 'science' is: the word *science* is part and parcel of ordinary, colloquial English. The same is not true, however, of 'the humanities'. For example, in the database Cobuild Bank of English (Collins UK, 1991), *science* occurs about 50 times more often than *humanities* (50,000 vs 1000 occurrences). As these numerical contrasts indicate, the word *humanities* belongs to a specialized, academic register of English. It is not surprising, therefore, that many speakers of English have no clear idea of what this word really means.

The phrase *the social sciences* is not part of colloquial English either, but most people would take it to be some kind of extension from *science*, modified by the adjective *social*, which is used in English very widely. It is likely, therefore, that the phrase *social sciences* would not appear to many speakers of English as puzzling or incomprehensible, and that the association with *science* would lend the phrase some of this word's prestigious glow. This is not the case, however, with *the humanities*.

It is particularly important, therefore, that the meaning of the phrase *the humanities*, and the idea behind it, should be explained – both to various funding bodies and to the general public. Without some such explanations, it might not be clear to many people why 'the humanities' should have a claim on any institutional space – or on the public purse – in countries like Australia, Canada, Britain, and the United States. For example, it could be asked: What can 'the humanities' contribute to human knowledge and human understanding that neither *science* nor *the social sciences* can? This paper will seek to provide a basis for an answer to this question.

'Science' as a conceptual artefact of modern English

The English word *science,* which excludes not only 'the humanities' but also logic and mathematics, does not have exact equivalents in other European languages, let alone languages further afield, and is saturated, so to speak, with 'British empiricism' (Wierzbicka, 2010a). For example, in German, the word *Wissenschaft* (from *wissen* 'to know') embraces all systematic presentation of knowledge, and its two branches – *Naturwissenschaften* and *Geisteswissenschaften* (from *Natur* 'nature' and *Geist* 'mind, spirit') – do not privilege empirical, sense-derived knowledge over any other kind.

In French, too, there are *les sciences exactes* ('exact sciences') and *les sciences de l'homme* ('human sciences'), and the French adjective *scientifique* is closer in

meaning to the English words *scholarly* and *academic* than to the English word *scientific*. But in English, knowledge based on 'experience' (derived from the senses) achieved such great prestige and such a privileged status in the edifice of human knowledge that it shaped the modern concept of 'science' itself. Consequently, in the conceptualization of knowledge embedded in modern English, there is no category of 'science' or 'sciences' which would include both 'natural sciences' and 'the humanities.' Rather, the concept of 'science' is very prominent in modern English, and the concept of 'the humanities' is not, and the two are not seen (in ordinary thinking, reflected in ordinary language) as being on a par.

The modern English concept of 'science' focuses on empirical and objectively verifiable knowledge about 'things.' The expression *social sciences* purports to extend the empirical method and the requirement of verifiability to the study of 'people' rather than 'things,' especially 'people' studied as groups rather than individuals. The prestige of 'social sciences' derives from their perceived (and purported) analogy with 'science.'

The roots of the concept of 'the humanities' in the thought of Giambattista Vico

The concept of 'the humanities' evokes a field of inquiry which is fundamentally different from 'science' and which has its own goals and its own methods. The subject-matter of 'the humanities' is 'people,' and people studied not in the way in which 'things' can be studied.

The fundamental distinction between studying things and studying people was introduced into European thought by the Italian 18th-century philosopher Giambattista Vico (1968). Although modern English has since developed its own ways of categorizing knowledge, with its own concepts of 'science,' 'social sciences,' and 'the humanities,' Vico's basic idea lives on in the modern English concept of 'the humanities' (as it does in the German concept of *Geisteswissenschaften* and in other comparable concepts in other European languages).

Essentially, the idea is that people can know things of many kinds about people in a way they can't know things about anything else (e.g., rocks, plants, or stars), that it is extremely important for people to know things of these kinds about people, and further, that people can know things of these kinds about people imaginatively, from inside, and that they can have a better understanding of them than they can ever have of the 'natural world' (the world of 'things').

To study people in the way one can study 'things' would mean (according to Vico) 'to ignore the distinction between human beings and non-human nature, between material objects and natural or emotional life' (Berlin, 1976, p. 24). According to Vico, it is difficult but vitally important for people to pursue knowledge about people that is different in kind from the knowledge about the external world.

Taking this contrast between the knowledge of the external world and the knowledge of people as human beings as his point of departure, Vico set out his

vision of the *Scienza nuova* – a phrase whose rendering as 'the new science' can be misleading to English readers, given that in contemporary English the word *science* means something quite different from what *scienza* meant for Vico, and indeed, from what *science* meant in 17th- and 18th-century English. Vico's *scienza nuova* was not some extension of *science* (conceived of in the sense in which this terms is used in modern English, that is, roughly, as the empirical study of the external world), but a different kind of knowledge which includes a perspective 'from within' the subject-matter.[1]

Such thinking about human beings can lead to 'true knowledge' no less than what 'the naturalists do' – in a sense, (Vico held), even more so[2]:

> If, following Descartes' rigorous rule, we allowed only that to be true knowledge which could be established by physics or other natural sciences, we should be confined to behaviourist tests, namely the uncritical assimilation of the human world to the non-human – the restriction of our knowledge to those characteristics of men which they share with the non-human world; and consequently the attempt to explain human behaviour in non-human terms, as some behaviourists and extreme materialists, both ancient and modern, inspired by the vision (or mirage) of a single, integrated, natural science of all there is, have urged us to do. It may be that a good deal more can be said in such purely 'physicalist' language than its opponents have, at times, thought possible; but certainly not enough. For we should find ourselves debarred by such self-imposed austerity from saying or thinking some of the most natural and indispensable things that men constantly say or think about other human beings. The reason is not far to seek: men can think of others only as being like themselves. (Berlin, 1976, p. 24)

Vico concluded that, as Berlin puts it, 'Descartes is the great deceiver, whose emphasis on knowledge of the external world as the paradigm of all knowledge has set philosophy on a false path' (Berlin, 1976, p. 25).

For Vico, the intimate knowledge of human beings, which is the proper aim of, as we might say today, 'the humanities,' is inextricably linked with the question of language. As Claudio Véliz (1994) puts it in his retelling of Vico's ideas, 'The crucial Vichian argument rests on the primordial character of language. Immensely more important than all other human artefacts, signs, symbols, and institutions, language is the definitive element in culture' (p. 16). It is also the one that 'portrays most tellingly the modalities and transformations of the social ambit' (p. 16) and the 'modifications of our human mind' (p. 131).

In addition, the understanding and interpretation of human conduct and behaviour cannot be strictly separated from moral judgment. 'Natural sciences' are widely taken to be value-free (and 'social sciences' tend to imitate 'science' in this regard). 'The humanities,' on the other hand, do not aspire to be value-free. Thus, when a historian writes (with reference to the historiographies of Stalinism and Nazism) that 'moral judgments are [. . .] intrinsic to all historical understanding' (Malia, 2002, p. 78), he is placing history in the context of 'the humanities'

rather than 'the social sciences.' This link with values and moral judgment, too, needs to be taken into account in the full definition of 'the humanities.'

How concepts can be defined and explained: A thumb-nail sketch of the NSM methodology

The definition and explanation of the concept of 'the humanities' to be presented here is based on the 'NSM' approach, developed over many years by the author and her colleague Cliff Goddard (see, e.g., Wierzbicka, 1972, 1996, and Goddard, 1998), and tested, in numerous publications (inter alia, in *Culture & Psychology*), by many scholars (see the NSM homepage: http://www.une.edu.au/bcss/linguistics/nsm/). The acronym 'NSM' stands for the Natural Semantic Metalanguage – a mini-language which corresponds to the intersection (the common core) of all languages. To define the meaning of a word or an expression in NSM means to explain it through simple and universal human concepts which do not require further explanation themselves and which can be found as words (or word-like elements) in all languages.

17th-century European philosophers like Descartes, Arnauld, and above all Leibniz advanced the idea that only a small repertoire of self-explanatory simple concepts (his 'alphabet of human thoughts'; see Leibniz, 1903) can provide the bedrock of all human understanding. The NSM approach to semantics and hermeneutics has adopted this idea, and over more than three decades NSM researchers have undertaken wide-ranging experimentation over many semantic domains, across many diverse languages, and have identified within the languages under investigation matching minimal sets of lexically embodied simple meanings in terms of which all complex meanings and ideas could be intelligibly explained and compared.

The full NSM lexicon of universal semantic primes is set out, in summary form, in Table 1, using English exponents (similar tables can be drawn for other languages, see Goddard, 2008; Goddard & Wierzbicka, 2002; Peeters, 2006).

The universal 'mini-language' based on these primes can be used effectively as a 'natural semantic metalanguage' for exploring and comparing ways of thinking and categorizing experience reflected in different languages of the world and different historical states of the same language (e.g., English).[3]

Defining 'the humanities'

The concept of 'the humanities' focuses on studying human experience: what can happen to people and what people can do; possible ways of thinking, ways of feeling, and ways of speaking; possible motives and possible values. The words *can* and *possible* highlight the imaginative character of the research in 'the humanities.' They also highlight the double focus of 'the humanities': on 'humanity' as a whole and on individual (though culturally embedded) human beings in all their immense diversity.

Table 1. Semantic primes – English exponents (Goddard & Wierzbicka, 2002)

I, YOU, SOMEONE, SOMETHING/THING, PEOPLE, BODY	substantives
KIND, PART	relational substantives
THIS, THE SAME, OTHER/ELSE	Determiners
ONE, TWO, SOME, ALL, MUCH/MANY, LITTLE/FEW	quantifiers
GOOD, BAD	evaluators
BIG, SMALL	descriptors
THINK, KNOW, WANT, FEEL, SEE, HEAR	mental predicates
SAY, WORDS, TRUE	speech
DO, HAPPEN, MOVE, TOUCH	action, events, movement, contact
BE (SOMEWHERE), THERE IS, HAVE, BE (SOMEONE/SOMETHING)	location, existence, possession, specification
LIVE, DIE	life and death
WHEN/TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT	time
WHERE/PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE	space
NOT, MAYBE, CAN, BECAUSE, IF	logical concepts
VERY, MORE	intensifier, augmentor
LIKE	similarity

Notes: Primes exist as the meanings of lexical units (not at the level of lexemes). Exponents of primes may be words, bound morphemes, or phrasemes. They can be formally complex. Each prime has well-specified syntactic (combinatorial) properties.

Drawing on Vico's insights and using the metalanguage of universal human concepts, we can propose the following explication (that is, explanatory definition) of the expression *the humanities*:

The humanities

a. some people do some things for a long time because they think like this:

b. it is good if people can know things of many kinds about people

c. it is good if people can know what kinds of things can happen to someone
it is good if people can know how someone can feel when these things happen

d. it is good if people can know how someone can think about things of many kinds
it is good if people can know how someone can feel
when this someone thinks about these things

e. it is good if people can know what kinds of things someone can say with words
it is good if people can know how someone can say these things with words

f. it is good if people can know what kinds of things someone can do
it is good if people can know why someone can want to do these things

g. some people say about things of some kinds: 'it is good if someone does these things'
other people say: 'it is not good if someone does these things'
it is good if people can think about things like this

h. it is good if people can know how someone can live
it is good if people can think about things like this'

i. when these people do these things, they do them like someone can do things if this someone wants to know something about other people, not about things

j. if these people do these things well,
afterwards people can know many things of many kinds about people because of this

As this explication shows, the scope of the subject-matter of 'the humanities' is very broad. It embraces things that happen to people, things that people do, and things that people say, as well as people's thoughts, emotions, motivation, and values. This broad scope of the subject-matter of 'the humanities' explains why fields as different as history, biography, literature, philology, linguistics, classics, philosophy, and religious studies can all be seen (and can see themselves) as part of 'the humanities.'

Some of these fields can also see themselves as part of 'the social sciences,' or at least as having one foot in 'the social sciences' and one in 'the humanities.' Such overlaps are possible because the concept of 'the humanities' refers not only to a particular subject-matter but also to a particular approach.

This approach envisaged by 'the humanities' is different – fundamentally different – from that of 'science,' and consequently from that of 'the social sciences,' which seek to emulate the approach of 'science.'

As already noted, one key feature of the explication of *the humanities* which distinguishes it from that of *science* is the use of the word *can* in most of the components, from (b) to (h). According to the concept behind the word *humanities,* it is good for people to know how someone **can** think, feel, speak, live, what kinds of things **can** happen to someone, and what kinds of things someone **can** do. This use of the modal *can* makes the concept of 'the humanities' unempirical (in the sense in which the word *empirical* is usually used): people can't study by observation or experiment how someone else *can* think, feel, speak, or live. This 'can' points to a necessary effort of the imagination, which cannot be fully replicated and empirically verified.

Furthermore, the definition of 'the humanities' outlined here is not exclusively focussed on knowledge: as components (g) and (h) indicate, 'the humanities' seeks also to provide opportunities for people to *think about* how someone can live, and

whether it is good or not good for people to do things of some kinds. This is not something open to empirical verification either.

The appeal to the imagination inherent in the recurring 'can' links the work in 'the humanities' in some ways to the work involved in creative arts. It also connects with the component 'if these people do these things well,' which is absent from the explication of *science*: *science* is not conceived of as cognate to *art*, and the two words (*science* and *art*) can be contrasted. The word *humanities*, on the other hand, is normally not contrasted with the word *art*. This is due, I suggest, not only to the avowedly non-empirical character of 'the humanities' and to its conceptual link with creative imagination, but also to its implication of there being here some room for individual mastery and excellence which cannot be fully captured by measurable 'quality indicators' (to use an expression from current bureaucratic parlance).

Another feature which links the concept of 'the humanities' with that of 'art' is suggested by the word 'afterwards' in component (k). 'Art' produces, of course, 'works of art,' that is, some lasting products. 'The humanities,' too, hope to produce some tangible 'products' – perhaps more enduring and less likely to become outdated than the results of scientific research tend to be. Often, these 'products' take the form of books (rather than journal articles), but they can also take the form of critical editions, dictionaries, philological exegesis, and so on. As we will see in the next section, 'science' appears to aspire to being constantly on the move and the 'scientists' appear to always 'want to know more.' By contrast, the concept of 'the humanities' includes an aspiration that '*afterwards*, people can know many things of many kinds about people because of this.'

The 'non-scientific' and experiential aspect of 'the humanities' is also reflected in component (j), which refers, effectively, to the goal of 'understanding other people.' A social scientist seeks knowledge (of some kinds) about 'people,' but not about '*other* people.' The phrase *other people* makes room, as it were, for the person of the researcher, for this person's empathetic understanding of other human beings. This points to a pursuit of intersubjective rather than purely 'objective' knowledge and understanding, which again sets *the humanities* apart from *science* and *the social sciences*.

Such intersubjective understanding is linked inextricably with self-understanding – a feature of 'the 'humanities' highlighted by the moral philosopher Charles Taylor, who (like Vico) sees all human understanding as closely related to the question of language. According to Taylor, the goals of understanding and self-understanding can only be achieved if the language of explanation makes sense to the human agents/experiencers themselves. Commenting on, and cautioning against, 'the great hold of natural science models in our entire enterprise of self-understanding in the sciences of human life,' Taylor calls repeatedly on the notion of 'making sense' of ourselves and of our lives, 'of the actions and feelings of ourselves and others' (Taylor, 1989: 57), and in his view this can be achieved only in a language in which people actually live their lives. Taylor's main point is that the approach, methods, and even the language of 'the humanities' need to be different from those of 'science and 'sciences.' The contrast he draws between the standpoint of

'the observer' and that of 'the agent [...] making sense of his own thinking, feeling, and acting' echoes that drawn by Vico between, on the one hand, our knowledge of the external world, and on the other, our knowledge of human beings.

Both Vico's and Taylor's concern for the self-understanding of the 'agent' chimes with another feature of the explication proposed here (in addition to 'other people'), namely, its focus on 'someone' (in the singular) rather than 'people' (in the plural) as the primary object of interest.

Generally speaking, 'science' studies classes of things rather than individual objects, and 'social sciences' focus on populations and societies. 'The humanities,' on the other hand, have a double focus. On the one hand, they are interested in 'people' in general and they are predicated on the assumption that 'it is good if people can know things of many kinds about people.' On the other hand, however, they are interested in individual human beings – not necessarily in specific individuals as such but in the whole range of human experience, human pursuits, emotions, values, ways of thinking, and ways of living.

Thus, the purpose of 'the humanities' is not to study particular societies or to compare societies across places and times, but rather to understand 'human beings.' This is in fact how one of the best contemporary dictionaries of English, *Collins Cobuild English Language Dictionary* (Collins UK, 1991), defines the word *humanities:* 'The humanities are the subjects of study such as literature, philosophy, and history which are concerned with human beings, their ideas, actions, and relationships, rather than science subjects.'

Defining 'science,' 'the social sciences,' and concepts like '*Wissenschaft*'

The main goal of this paper is to explicate the concept of 'the humanities.' Since, however, the concept of 'the humanities' has been contrasted here with the concept of 'science' (and its extension 'social sciences'), it is not possible to omit altogether the question of the meaning, and of the history, of *science*.[4]

The meaning of *science* has changed considerably in the course of the last two centuries, and that this change has to do both with the scope and the methodology of what can be described as 'science' now and what could be so described two centuries ago.

For example, the 18th-century Scottish philosopher Thomas Reid, in his *Essays on the Intellectual Power of Man* published in 1785, referred to both mathematics and the study of what he called 'the operations of the mind' as 'sciences.' The greatest difference between these two 'sciences' is, as Reid put it:

> that the objects of mathematics being things external to the mind, it is much more easy to attend to them, and fix them steadily in the imagination. The difficulty attending our enquiries into the powers of the mind serves to account for some events respecting this branch of philosophy, which [...] remains, to this day, in a very low state, and as it were in its infancy. (Reid, 2002 [1785], pp. 61–62)

Thus, for Reid, *science* referred to, roughly speaking, any systematic and rigorous pursuit of knowledge. What he called 'natural philosophy,' and what we might call today the empirical study of natural phenomena, was for Reid an important branch of 'science,' but only one branch among many. In present-day English, however, what for Reid was *a branch* of 'science' has become simply 'science,' and the other branches have found themselves outside the scope of 'science' as the word is now commonly understood. This is particularly clear in the way the derived words *scientific* and *scientist* are now used.

For example, in his book about Darwin the evolutionary biologist and palaeontologist Niles Eldredge (2005) states: 'Starting with Newton, the goal of every scientist, no matter how religious they were, in England at least, was to classify natural causes for natural phenomena' (Quoted in Cosic, 2008, p. 16). Eldredge takes it for granted that *scientists* study 'natural phenomena,' and also that *science* studies those phenomena empirically and relies, crucially, on *evidence* (a word which recurs throughout Eldredge's discussion). This is consistent with the following explication of the word *science* (as it is used in present-day English):

Science

a. some people do some things for a long time because they think like this:
b. 'it is good if people can know many things about things of many kinds
c. it is good if people can know these things like someone can know some things when it is like this:
d. this someone can see this something
e. this someone's hands[M] can touch this something
f. this someone can say some things about this something with some number[M] of words'
g. because these people think like this, they do some things to some things
h. they do these things not like other people do things to many things, because they want to know some things about some things well
i. when these people know some things about some things, they want to know more things

Key features of 'science' as presented in this explication include a focus on knowing many things about 'things' (rather than 'people') in component (b), an experimental basis (not simply 'doing things' but 'doing things *to some things*') in (g), an empirical orientation (relying on evidence such as that provided by 'the eye and the hand') in (d), and (e), an emphasis on numbers and measurements in component (f), and an incremental, on-going, 'forward-moving' character ('they

want to know more') in (j). In addition, the references to seeing, touching, and 'number words' imply a kind of verifiable knowledge, accessible, in principle, to anyone through clear procedures based on seeing, touching, and measurements.

The explication restricts *science*'s goals to providing knowledge 'about things' (rather than people), and it refers, implicitly, to the empirical method (ultimately based on the senses, such as seeing and touching). The reference to 'doing many things to some things,' too, evokes laboratory research and the like, where the scientists manipulate 'things' of certain kinds in order to obtain knowledge of a kind that can be derived from such experimental approaches. There is also a reference here to people knowing 'things of some kinds' *well*: the scope of *science* may be limited (e.g., it excludes intimate knowledge about people's thoughts, feelings, and experiences), but at least the knowledge provided by it is expected to be well established and clearly articulated.

In all these respects, the present-day meaning of *science* is different from, for example, that of the German *Wissenschaft*, the French *science*, or the Russian *nauka*, as shown in the following explication:

Wissenschaft

a. some people do many things because they think like this:

b. 'it is good if people can know many things about things of many kinds'

c. because these people think like this, they do many things for a long time

d. they do these things not like other people do many things

e. these people want to do these things in this way
because they want to know many things about things of many kinds well

Component (b) shows that those pursuing '*Wissenschaft*' aim at comprehensive knowledge extending over many domains. There is no reference here to pursuing knowledge through 'doing things *to some things*' (as in experimental science). Furthermore, while there are references to a special approach and method in (d), and to a high standard of knowledge in (e), there is no reference to empirical investigations like those relying on the proverbial 'eye and hand' in the tradition of the great 17th-century experimental scientists (as we would call them now) like Robert Boyle, Robert Hooke, Isaac Newton, and the Royal Society of London in general (see Wierzbicka, 2010a).

As for *the social sciences*, they, like *the humanities*, are interested in 'people' rather than 'things.' At the same time, however, they are interested only in certain kind of things that can be known about people – those kinds that can be established by methods similar to methods used by *scientists*.

the social sciences

a. some people do many things because they think like this:
b. 'it is good if people can know many things of many kinds about people
c. it is good if people can know these things well'
d. because these people think like this, they do many things for a long time
e. they want to do these things not like other people do many things
f. they want to do these things like scientists[M] do things

The concept of 'scientists' (roughly, practitioners of 'science') appears to be more central to 'social sciences' than the concept of 'science' itself. Of course, the word *scientist* is derived from the word *science*. In trying to explicate *the social sciences* by trial and error, one finds that an explication based on the semantic molecule 'scientists' works better than one based on the word *science* itself. The implication seems to be that practitioners of *social sciences* model their own work on the work of 'scientists': they want to approach their subject-matter (people) in the way that 'scientists' approach theirs ('things of some kinds'). This is different from the aspiration of 'the humanities' to approach the same subject-matter (people) from a perspective which is not open to 'scientists' investigating 'things' and to gain insights different in kind from those that 'scientists' can and want to attain.

Conclusion

There is a pressure on speakers of English to regard 'natural sciences' as a paradigm of all knowledge – at least all knowledge that modern societies should value and pursue. As we have seen, the Italian Vico held the Frenchman Descartes responsible for the undue absolutization of that particular paradigm. In fact, however, neither Italian nor French (nor other European languages) have absorbed this absolutization in the way English has. The semantic changes that the English word *science* underwent in the last two centuries or so make empirically-based knowledge of the external world seem central to all human knowledge, and self-evidently so (see Wierzbicka, 2006, 2010).

The pressure of modern English suggests to speakers of English, in a subtle and insidious way, that really there is no knowledge like 'scientific knowledge,' and that if one wants to focus on 'people' rather than 'things,' one should at least model one's endeavours on those of the 'scientists,' and to try to practise 'social *science*,' 'cognitive *science*,' or some other '*science*.' Equally, there is a pressure on funding

bodies in English-speaking countries to see excellence in research and scholarship through the prism of the priorities and expectations of 'science,' in the modern English sense of the word.

It is important, therefore, for those working in 'the humanities' to explain their own priorities and expectations to their colleagues in 'science' and to the society at large. It is also important for linguists to draw attention to the historically-shaped semantic peculiarities of the modern English words *science*, *sciences*, *scientific*, and *scientists* – peculiarities which may sometimes prevent speakers of modern English from making up their own minds about the kinds of knowledge necessary for human beings and their societies to flourish.

Notes

1. As discussed by Berlin, Vico's concept of 'understanding' had a deep influence on the German philosopher Dilthey's notions of '*Verstehen*' and '*Einfühlen*,' and through him it influenced many other modern scholars (see, e.g., Berlin, 1976, pp. 4, 27, 32, 97, 107, 173).
2. I am quoting here Berlin's masterly account of Vico's idea, rather than Vico himself, in order to save space and to ensure clarity. Vico's 18th century prose can be obscure and convoluted, and to show clearly what he means one would need to use many lengthy quotes. Berlin's style, on the other hand, is modern, lucid, and concise.
3. In addition to semantic primes (unanalysable 'atoms of meaning'), many NSM explications rely also (in a limited way) on 'semantic molecules,' especially in the area of concrete vocabulary. In NSM explications, such molecules are marked with the symbol [M]. Molecules are not necessary for explicating 'the humanities,' but they are relevant to the explication of 'science.' For example, the explication of 'science' includes the words *hands* and *number*, which are not primes and whose meaning can be decomposed into primes, but which function as units of meaning within the concept 'science.' Since molecules can be processed as single units, they allow the mind to manipulate vast amounts of semantic content with relative ease. Many molecules are foundational concepts in knowledge structures (see Goddard, 2009, 2010; Wierzbicka, 2007, 2010b).
4. It is impossible to review in the space of this paper the extensive literature on the subject of 'science,' or on distinctions such as those between 'nomothetic' and 'idiographic' sciences, or between 'homological' and 'dialogical' sciences. For one relevant and congenial recent discussion, see Salvatore and Valsiner, 2008. For a more detailed discussion of the concept of 'science' embedded in modern English, see Wierzbicka, 2006, 2010a).

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