Worldview:
Personal ideology, values and beliefs concerning metaphysics, epistemology, human nature and morality

Artur Nilsson
Master thesis 2004, revised 2007

Guidance: Bert Westerlundh
Sven Birger Hansson
First, de St. Aubin’s (1996) modified polarity scale (MPS), adapted from Tomkins (1965), was investigated, using data from 315 Swedes. Structural equation modeling rendered two super factors, humanism and normativism, and two sub-factors of humanism. Adding the third factor only produced a slight increase in model fitness. The second part of the study was aimed at probing deeper into the worldviews of 80 students, and factors assumed to influence them, using questionnaires and Q-methodology. This yielded four main worldviews and a reconceptualization of humanism and normativism, modeling humanism as a dynamic action-oriented dimension with the basic incitement of promoting happiness, along with general optimism, and normativism as a robust bipolar dimension constituting the philosophical foundation of the worldview. The results also suggest that the integration of humanism and normativism is pivotal to psychological health. Further implications and suggestions for research are discussed.

**Keywords:** worldview, weltanschauung, philosophy, philosophy of life, beliefs, assumptions, epistemology, realism, relativism, constructivism, metaphysics, ontology, materialism, spiritualism, cosmology, determinism, free will, meaning of life, morality, moral, utilitarianism, deontology, contextualism, ethics of care, contractualism, egoism, altruism, compassion, human nature, fixed, malleable, static, dynamic, values, collectivism, individualism, Tomkins, personal ideology, ideo-affective posture, ideo-affective resonance, polarity theory, humanism, normativism, the polarity scale, existentialism, humanistic psychology, Buddhism, spirituality, reductionism, evolution, scientism, self, mood, affect infusion, well-being, health, epistemic motivation, culture, authenticity, Q-methodology, Q-technique, structural equation modeling.

I especially want to thank Bert Westerlundh and Sven Birger Hansson for helping me to implement my ideas into a viable research project, for knowledgeable guidance along the way, and for special aid with the structural equation modeling. I also want to thank the others in the *Social Cognition and Emotion Network* at Lund University for their helpfulness and Ed de St. Aubin for answering my questions. Finally, a special thanks to fellow students and everyone else who has inspired and motivated me.
Table of contents

The description of worldviews ................................................................................................................................. 9

Historical background .................................................................................................................................................. 9

The components of a worldview .............................................................................................................................. 12
  The foundational elements of a worldview .............................................................................................................. 12
  The elaborate elements of a worldview .................................................................................................................. 14
  The total worldview .................................................................................................................................................. 15
  Describing the components with intentional terms ................................................................................................ 16

The interconnectedness of the worldview components .......................................................................................... 20
  The evolutionary roots of an interconnected worldview .......................................................................................... 20
  The motivation to revise the worldview .................................................................................................................. 26
  Worldview revisions and revolutions ......................................................................................................................... 26
  The openness and closedness of a worldview .......................................................................................................... 26
  Narrative interrelations .............................................................................................................................................. 26

The psychological functioning of worldviews ....................................................................................................... 29
  The practical function ................................................................................................................................................ 29
  The existential function .............................................................................................................................................. 32
  The epistemic, protecting, guiding, and affirmative subfunctions .......................................................................... 32
  Worldview therapy .................................................................................................................................................... 36
  Psychological desiderata .......................................................................................................................................... 36

How worldviews are expressed .............................................................................................................................. 37
  Communication through language ............................................................................................................................ 37
  Non-linguistic avenues of communication ............................................................................................................... 39
  Expression in general psychological processes ........................................................................................................ 39

Classifications of the contents of worldviews ........................................................................................................ 39
  Categorical and dimensional approaches .................................................................................................................. 40
  Conceptualizations in philosophy ............................................................................................................................ 40
  Conceptualizations in psychology ............................................................................................................................ 41
  Conceptualizations in anthropology .......................................................................................................................... 44
  The self-concept ......................................................................................................................................................... 45
  Polarieties within and between worldviews .............................................................................................................. 45

A worldview classification in terms of philosophical beliefs and values .............................................................. 48

Metaphysical beliefs ...................................................................................................................................................... 48
  Materialism versus spiritualism .................................................................................................................................. 49
  Theories and research on spirituality .......................................................................................................................... 50
  Free will ...................................................................................................................................................................... 51
  Theories and research on beliefs related to free will, agency, and control ................................................................. 52
  Meaning of life .......................................................................................................................................................... 53
  Psychiatric theories of meaning in life .......................................................................................................................... 54
  The psychological benefits of experiencing meaning in life ...................................................................................... 55

Epistemological beliefs .................................................................................................................................................. 57
  Realism and relativism .............................................................................................................................................. 57
  Rationalism and empiricism ........................................................................................................................................ 57
  Constructivism .......................................................................................................................................................... 58
  Common conceptual confusions ................................................................................................................................. 58
  Theory and research on epistemological beliefs in education .................................................................................. 59
The progress of science is to a great extent determined by the invention of useful conceptual tools. We have for example, in physics and biology, progressed far from speaking about ethereal substances and spontaneouss generation of life to sophisticated descriptions of fundamental forces, elementary particles, and spatiotemporal dimensions, and to comprehensive taxonomies of different forms of life as well as detailed principles about the evolution of these forms of life. But what about psychology? In psychology, the conceptual toolbox is indeed bristling with *attitudes*, *traits*, *behavioral dispositions*, *schemata* and many other tools that are of great use in understanding and explaining human psychology. Baumeister (1999) has even claimed that it is likely that most of the most general psychological principles have – parallelling the natural sciences – been discovered, which would suggest that the conceptual toolbox is, by and large, complete. There is however at least one serious problem with this line of reasoning: Even if we have many useful ways of construing the *atoms* of human psychology, there is utter scarcity of descriptions that weave them together in a coherent way. In fact, because the atoms of psychology are in part constituted by their relationship to each other, we cannot even explicate the atoms completely without knowing a lot about how they are interrelated. The conceptual toolbox of psychology is today so replete that it can account for lots of statistical variance in psychological measurements, although it is in such disarray that we are often unable to give good explanations as to why. We need to complement it with concepts that help us to coherently organize the more atomistic concepts in terms of psychological functioning. One such concept is *worldview*, which is, despite its prima facie importance, scarcely entrenched within psychology.

There are at least three fundamentally different ways to use the term worldview: (a) we can talk about worldviews as abstracted from their concrete instantiations in individuals, groups, and cultures (e.g. a *mechanistic* or *holistic* worldview), (b) we can talk about worldviews as semiotic structures that are shared by actual social groups, entire cultures, or historical eras, or (c) we can talk about the worldviews of individuals. I will use the term worldview in the third sense, to encompass an individual’s *total* view of the world, that is, all of the individual’s psychological states and events that we describe with *intentional terms*. Intentional terms, such as ‘belief’, ‘desire’, ‘emotion’, ‘wish’, and so on, are all those terms that describe a mental state or event as being about, or otherwise directed at, some aspect of the world. For example, my belief that water is H\textsubscript{2}O is about the chemical structure of water and my desire for ice-cream is directed at ice-cream, which means that I am viewing water and ice-cream in a specific way (see Searle, 1983).
In this sense, worldview is tightly intertwined with personality, because an individual’s personal ideas about the self, other, and life general, and characteristic patterns of desires, fears, dreams and so on, which strongly propel action, lie at the very heart of his or her personality. But worldview may not encompass everything we include in personality, because we may also want to speak of non-intentional action tendencies as aspects of personality, and not all aspects of a worldview are particularly relevant to describing personality.

Moreover, the worldview is the basic unit for explicating those kinds of adaptations that implicate consciousness (i.e. the psychological side of adaptation), as well as the concomitant evolutionary driving forces in their psychological manifestation; it helps us to understand how human beings cope with life in itself. As Frankl (1969) so eloquently put it: “The human being needs a framework of values, a philosophy of life, a religion or religion surrogate to live by and understand by, in the same sense that he needs sunlight, calcium or love.” This is constantly reactualized as disastrous events, such as the terrorist attacks on September 11th 2001 and the tsunami catastrophe on December 25th 2004, push human coping to its extremes, showing that psychological recovery revolves around rebuilding some specific systems of belief (see Janoff-Bulman, 1992). In fact, the consolidation of such central aspects of the worldview, which often occurs as a coping response to significant life events, seems integral to the formation and maintenance of a satisfactory sense of personal identity and meaning in life. In today’s postmodernized society, with its proliferation of cultural influences upon worldview formation and the increased pressure upon individuals to develop personal worldviews rather than assimilating ready-made systems of belief from culture (Giddens, 1991), the struggle to create and maintain personal systems of belief seems especially crucial to psychological adaptation. Furthermore, the fact that the maintenance of a coherent worldview is so tremendously important for psychological functioning can also help us to explain motivated reasoning and human conflict. Psychologists have found that people often engage in a biased search for positive evidence, with more effort invested in justifying the more desirable conclusions, and that established beliefs tend to persist in spite of disconfirming evidence (Kunda, 1999). Thus, a piece of information is judged not only for its correspondence with reality and for the rationality of argument, but also for its ability to be coherently integrated into the worldview. It seems that the maintenance of a simplified map of the world that makes sense of sense impressions and keeps its stability, in spite of fluctuations in the environment, creates a powerful informational system that
can represent an enormous amount of aspects of the world, albeit sacrificing precision, thus providing useful guidance for action (see Gabora, 2000; Lester, 2000). It also seems to be psychologically important to feel confidence in your worldview. Terror management theorists have studied the strategies that people use, when they are propelled to do so, to fend off information that they perceive as threatening. They have shown, for example, that people often derogate, or even aggress toward, other individuals with worldviews different from their own, rationalizing and dismissing criticisms, that people may try convert the point of view of other persons so as to assimilate it into their own worldviews, and that people sometimes accommodate their own worldview so as to include compelling components of other worldviews (McGregor et al., 1998). These examples illustrate the immense explanatory power that the worldview concept has regarding very basic psychological phenomena.

Historically, the term worldview, or *weltanschauung*, arose in German 19th century philosophy, from where it spread so vigorously within intellectual curcuits that it has today been assimilated into many different languages (see Naugle, 2002). Today, it is mostly used in theological contexts, although there have been some scattered manifestations in psychology during the 20th century. It is however important to note that talk about worldviews, or central aspects of worldviews, is often disguised in other terms in psychological research (Koltko-Rivera, 2004). The worldview concept per se has been eschewed in psychology during most of the 20th century, until very recently, which is probably due to the dominance of the positivist ideal of science with its methodology of reductionism and specialization, perhaps fueled by the historical association between worldview philosophy and relativism. It is indeed notoriously difficult to define such a general concept in terms of behavioral operations. But, a scientific concept may be useful in other ways than by virtue of being operationalized; it may for example, as in the case with worldview, provide a theoretical framework that provides principles that coherently organize and explain the meaning of, and interrelations between, concepts that can indeed be operationalized. In the present case, we can still operationalize, and in other ways assess, parts or dimensions of worldviews. The relevant research that has been done has however, with some notable exceptions (Tomkins, 1963, 1965; Rokeach, 1960, 1968, 1973), tended to focus on narrow parts of worldviews or on the specific factors that influence an individual’s beliefs and attitudes. Psychologists have also often been interested in illusions, delusions, and abnormal, irrational, and otherwise dysfunctional beliefs, with too much focus on judging beliefs
as to their correctness and rationality and too little on trying to understand how they actually function psychologically within the worldview.

I believe, however, that we are today ready to develop a mature psychology of worldviews. Koltko-Rivera (2004) recently published the first serious attempt to establish the legitimacy of the worldview construct in modern psychology as well as actually setting forth a psychology of worldviews, with a comprehensive review of relevant psychological theories and a first attempt to set up a definition of worldview and a theory of worldview functioning. This article was well-received, but there has unfortunately not been much work following it up. I partly disagree with Koltko-Rivera about exactly how to set up a definition and psychological theory of a worldview, but I will not pursue these questions in more detail here, because my main purpose in the present paper is to present empirical research and to provide an independent argument that the worldview concept is useful for psychology. At any rate, regardless of the exact details of a worldview theory, we need not see such a theory as being in competition with traditional psychological accounts, because different types of descriptions may be able to elucidate different properties of the phenomena of interest. A worldview approach does however have clear advantages over many traditional approaches. It does, for example, have a strong epistemic advantage over a traditional trait-approach to personality – a trait theorist normally assumes (a) that there is an underlying trait that causes thought, feelings, behaviors and so on, (b) that an individuals beliefs about his or her thoughts, feelings, behaviors and so on accurately describe, or otherwise reflect, his or her thoughts, feelings, behaviors and so on, and (c) that his or her verbal reports accurately describe, or otherwise reflect, his or her beliefs; a worldview-theorist only needs the last assumption, which seems to be the weakest one. Hence, if we simply construe some aspects of the worldview as a part of personality, in the way that I have already advocated, we can get a much more epistemically well-founded assessment of some central aspects of personality than the traditional trait-perspective allows for.

Thus far I have argued that worldview is a justifiable and useful construct and I have put forth some points about how it should be used. But, because this paper is mainly an empirical one, I will also get the opportunity to set a practical example as to how it is possible to perform empirical research on worldviews.

The overarching purpose of this research was to investigate the worldviews of individuals. For simplicity, I will present it as two different empirical studies, although they partially overlapped
in reality. The first study was an attempt to validate a questionnaire for worldview assessment that originated in Tomkins’ (1963, 1965) theory of personal ideology. This theory is arguably the most comprehensive and empirically anchored psychological worldview theory to date. In the second study I did a Q-methodological investigation of the worldviews of individuals, constructing an instrument with questions about philosophical matters involving metaphysics, epistemology, human nature, morality, and about what is valuable, also relating it to a host of other variables. Besides just looking for interesting patterns in general I also related the results to Tomkins’ questionnaire in order to attain a better description of what his dimensions really measure. Whereas the first study was mainly confirmatory, the second one was mainly exploratory.

Due to the exploratory nature of this research, and to the fact that there is no well-established conceptual and theoretical framework for talking about worldviews, I did however first have to develop a basic conceptual apparatus and a background pool of theoretical ideas, by synthesizing relevant work from many different areas of scientific inquiry as well as from philosophical writings on worldviews. To present this, I will begin by reviewing different ways that scholars have thought about worldviews, using this to delineate some general characteristics of worldviews while connecting it to relevant research. Subsequently, I will turn to general classifications of the contents of worldviews and to my own classification with those five domains of intentional states that were the focal point of the second study. Next, I will use the terminology introduced in previous sections to delve deeper into Tomkins’ classificatory scheme. After this, I will introduce some phenomena that can be expected to have a great influence on worldviews: mood, epistemic motivation, culture, subjective well-being, and authenticity – which I partially took into account in the design of the second study. Finally, I will switch to the presentation of the research itself: the purpose and rationale of the study, the method, the results, and the discussion of the results.

The description of worldviews

**Historical background**

Because there is such a heterogeneous wealth of different theories about worldviews, I will primarily try to outline similarities rather than differences between these theories. Thus, I will
focus on the worldview concept per se and use the theories of different philosophers to shed light on it. I will rely heavily on Naugle’s (2002) comprehensive description of the history of the worldview concept in a philological and philosophical perspective and in the social natural sciences, and on Koltko-Rivera’s (2004) more thorough description of the worldview concept in psychology, and on Tomkins (1963, 1965) and Rokeach (1960, 1968, 1973) for more in-depth writings on the psychological aspects of worldviews.

The worldview concept is rooted in German Idealism and Romanticism. Kant incidentally coined the term worldview by mentioning it once in reference to the inner intuition or perception of the outer noumenal world that cannot be grasped as it is in itself. After this, the worldview concept, and its relation to philosophy and science, became central in German philosophy, which was much due to Dilthey’s pioneering efforts to construct a theory of the genesis, articulation, comparison, and development of worldviews. The worldview concept evolved quickly in German philosophy to denote an intellectual, conscious, and self-realized conception of the universe from the perspective of a human being. It was used in a very general sense to refer to a fundamental perspective or set of beliefs that underlies and shapes all thought and action, that is, a perspective that is a vital part of the psychology of an individual.

The worldview construct spread from German philosophy to the general academia and quickly proliferated among intellectuals during the second half of the 19th century until the early 20th century. In the early 20th century, a dichotomization between fact, science, and truth, on the one hand, and belief, faith, and value, on the other hand, which is manifest in logical positivism, arose in Western philosophy. Theorists such as Husserl, Heidegger, and Freud juxtaposed worldview philosophy and science or scientific philosophy and even derogated the former. However, later developments in philosophy (e.g. Quine, 1953) have eroded such sharp boundaries between fact and belief. During the 20th century, the worldview construct has developed in many different directions in a heterogeneous group of traditions that have used it for entirely different purposes. Some worldview theorists have endeavored to promote people’s understanding and awareness of the worldviews of themselves and others, to foster communication between different worldviews, and to make it possible for people to choose between different worldviews. Others have used the worldview construct as a tool to establish a philosophical theory, to criticize a specific worldview, to justify their own worldviews, or even to convince people that they need to be liberated from their own inadequate worldviews. Moreover, almost all worldview theorists have
focused on the worldviews of societies, historical eras, religions, or other cultural units, rather
than on the worldviews of individuals. In fact, it is striking that so few 20th century theorists have
embraced the worldview construct as a powerful tool for understanding and explaining the
psychology of individuals, regardless of its epistemic, ideological, and emancipatory aspects. The
worldview concept has also been remarkably neglected in the Anglo-american philosophical and
scholarly discourse, which has specialized on more limited problems and concepts (Naugle,
2002; see also Koltko-Rivera, 2004; Sire, 2004; Smart, 2000).

Today, the term ‘worldview’ is a standard part of the vocabularies of many languages. It is
often treated as an obvious primitive that people are assumed to have an intuitive grasp of. But,
on closer scrutiny, many theorists have noted the extraordinary difficulty of pinning down the
meaning of such a complex and encompassing concept in a precise definition. Definitions of
worldview are often replete with metaphors, vagueness, and poetic language. Also, different
theorists participate in different discourses, they use the worldview concept for different
purposes, and they have different worldviews. Therefore, definitions of the term worldview tend
to be narrow and purpose-specific. Scholars have also employed a range of other concepts in the
discussions, such as life-view, personal ideology, world picture, episteme, language game, that
are closely related to, or that denote a part, of the worldview concept. Some even distance
themselves from the worldview concept and contrast it to their own allegedly superior concept
(see Naugle, 2002; Sire, 2004). My purpose here is not to investigate the idiosyncrasies of these
different concepts, but rather to discern what the conclusions of different theorists may imply
about the worldview concept. There is, however, one fundamental difference between different
worldview concepts. Some theorists use the term worldview in its original sense to refer to what
all human beings with functioning brains seem to have, namely a set of beliefs about reality. The
bulk of these theorists focus on the most fundamental assumptions of a worldview, which
underlie and structure all belief, feeling, thought and so on. I will call this concept foundational
worldview. Other theorists use the worldview concept to refer to a human construction that is
attained, chosen, or devised by some human beings, generally with the aid of deliberative
reasoning and reflection, in order to fulfil a certain purpose. I will call the latter concept
elaborate worldview. Worldviews always have foundations, and it is plausible that they must also
have at least some elaborate parts, although some theorists claim that few persons attain an entire
elaborate worldview. The failure to distinguish between worldview, foundational worldview, and
elaborate worldview has frequently caused confusion in the worldview literature. Elaborate worldviews can be further subdivided into *cultural constructions*, which address concerns that are shared among people, and *individual constructions*, which individuals may develop as a response to their own unique conditions of living. The term *social construction* may however be applied not only to cultural, but also to individual constructions, because social factors may influence an individual’s construction of a personal worldview.

*The components of a worldview*

According to many theories, the components of a worldview are *pretheoretical* or *preconceptual* in the sense that worldviews precede, condition, and structure all thought, that is, they are the skeleton or scaffolding upon which all thinking rests. On this account, a worldview is so deeply ingrained in the psychology of an individual that he or she thinks, acts, and lives through the worldview. This is the foundational worldview concept.

*The foundational elements of a worldview.* At the most fundamental level, or what may be called *the first layer*, is a number of innate structures. Gärdenfors (2004) has for example argued, from the perspective of cognitive science, that evolutionary processes have tailored some cognitive structures for representation, primarily of sensory properties such as sound, colour and taste, to fit the natural world so that these are reliable and nearly identical for different human beings. Kearney (as cited in Naugle, 2002) has made a similar argument, from the perspective of anthropology, claiming that evolutionary processes have formed a number of Kantian a priori categories of thought that are universally constitutive of the human mind. According to him, all human beings think through the categories of self, other, relationship, classification, causality, and, space and time, in their formation of a worldview, although the contents of these categories vary between different cultural and historical contexts. Other theorists have argued that there is a set of universal emotional states, or affective structures, which forms the basis for moral categories and values (Shweder & Haidt, 1993) or for the development of entire personal ideologies (Tomkins, 1963, 1965).

However, most of the foundational worldview theorists focus on the results of the activity of these innate mental structures rather than on the structures per se, that is, on a fundamental perceptual or interpretive framework that is developed early in life. This may be called *the second layer* of a worldview. For example, Dilthey claimed that worldviews arise from, and as a
response to, life in itself as it is lived, and Wittgenstein claimed that worldviews are simply inherited from the surrounding context and its prevailing language games. Jaspers distinguished between the descriptive content of the worldview, in the form of perceptions, and the affective content, in the form of attitudes, and claimed that they result from both the activity of innate categories and childhood experiences (see Naugle, 2002). The theories and empirical studies of Tomkins (1963, 1965) and Rokeach (1960, 1968, 1973) also indicate that affective or evaluative structures, that exert a powerful influence on the development of the worldview and on behavior, become ingrained into the fundamentals of the worldview early in life, as a result of interaction with significant others.

The foundational assumptions of the second layer can, whether they are inherited or acquired, much like the axioms of many logical systems, not be proven by the system itself. They form the hinges, or the substrata for all reasoning, and they are ultimately based on faith and intertwined with affective structures. Jung even believed that the foundations of a worldview resides deep down in the unconscious as a set of emotional experiences that are completely unaffected by logical arguments. Because of the fiduciary nature of these assumptions, many theorists (e.g. Dilthey, Nietzsche, Wittgenstein, and Derrida) have concluded that they are arbitrary, groundless, conditioned, and relative to a person or a culture, and that they therefore cannot provide a foundation for knowledge about any world external to the worldview. Other theorists, most notably Polayni, have contended that the assumptions are neither arbitrary nor certain and that they do form a genuine but fallible basis for knowledge. However, all worldview theorists concur that the foundational assumptions cannot be known with certainty, because any attempt to discover and correct bias, errors, and distortions must rely upon other human knowers whose worldviews are equally fallible (see Naugle, 2002). Some of the assumptions are never challenged because external referents in the form of person or culture agree with, and thus confirm them, whereas other assumptions are not even possible to empirically confirm or disconfirm as they lack external referents (Rokeach, 1960). Still, these foundational assumptions are of immense importance for the individual’s ability to think and act. Therefore, they must be presupposed, that is, taken for granted, and the individual must trust in them and commit to them passionately despite their fallibility. Mannheim has claimed that, in order to capture the pretheoretical, spontaneous, and unintentional impulse of culture, these foundational presuppositions should be the focus of a study of cultural worldviews as well. Berger and
Luckmann have coined the term *plausibility structure* to denote beliefs that are deeply embedded within, and presupposed in, a culture (see Naugle, 2002; see also Sire, 2004).

*The elaborate elements of a worldview.* Another group of worldview theorists focus on what may be called the *third layer* of a worldview, namely a sophisticated and elaborated set of beliefs that is constructed or chosen through deliberative effort in order to fulfil a given purpose. This is the concept of elaborate worldview. All human beings may have some elaborated beliefs, but for the whole worldview to be called an elaborate worldview it must satisfy some criteria or desiderata. It must have a practical utility as a framework for life that may not be provided by the foundational assumptions of the second layer of the worldview. The Swedish philosopher Hermerén has even suggested that a worldview should be adopted as a hypothesis, whose practical consequences will determine whether it is to be rejected or not. This is a striking contrast to the foundational assumptions of the second layer which require unconditional commitment. Moreover, a certain scope is a requisite for the utility of a worldview, because the worldview must be encompassing enough to address the most central aspects of life in order to be useful (see Bergström, 1996). Many worldview theorists also demand, from an elaborate worldview, sufficient coherence, or at least internal consistency, and consistency with empirical evidence (Naugle, 2002; Sire, 2004; Aerts et al., 1994).

Husserl, Jaspers, and Heidegger all claimed that the rudimentary and inchoate second layer of the worldview, which is conditioned by historicity, can be intellectually refined into a sophisticated worldview that answers the enigmas of, and gives practical guidance for, life. They also claimed that philosophy plays a critical role in providing a worldview philosophy that embodies this timeless and all-encompassing wisdom. In a similar vein, the philosopher Maxwell (2002) has argued that contemporary science desperately needs a paradigm change in order to reunite it with its philosophical foundations and to orient these foundations toward the basic humanitarian goal of promoting wisdom. Moreover, a number of scientists and philosophers from different disciplines have indeed embarked on a project of constructing a scientific worldview with explicit philosophical foundations (Aerts et al., 1994). They want to devise a coherent collection of concepts and theorems that may provide an understanding of as many elements of existence as possible, in order to help humanity out of the sense of alienation, fragmentation, and loss of meaning that permeates contemporary postmodern society. In this sense, the construction of a worldview is a collective project. But, the construction of a worldview is also a personal
project for every individual, because some conditions of life are unique to every individual, although some of them are also shared between individuals, and some of them, such as the universal problems of existence, are even shared by all human beings. Kierkegaard saw an elaborate worldview as an individual construction that is attained through personal experience and reflection upon this experience, and it is granted at a kairos moment in one’s experience. The interference of life itself or an unreflective preoccupation with suffering may prevent people from reaching such a worldview. Some 20th century psychologists have also approached worldviews as individual constructions. Tomkins (1963, 1965) believed that few persons do develop what he called personal ideologies, although the forms behind these ideologies, that is, a set of affective structures, are universal to human nature. Freud defined a worldview as an intellectual construction that solves every single problem that is inherent in existence uniformly on the basis of one overriding hypothesis. In a similar vein, Kelly portrayed human beings as lay scientists that actively construct mental representations to be able to predict and control the world (Koltko-Rivera, 2004; Naugle, 2002). However, the transition from modernity to postmodernity in Western culture has reinvigorated the view that worldviews are cultural phenomena, which is rooted in Nietzsche’s philosophy. Today, the great bulk of worldview discourses treat worldviews as structures that are socially constructed or shared between individuals. For example, the worldview concept has been embraced in Christian theology, during the last decades, as a tool for analysis of, and comparison between, different worldviews, and for justification of the Christian worldview (see Naugle, 2002; Sire, 2004).

*The total worldview.* My research is focused on the total of the worldviews of individuals. From this perspective, the separation between the different layers, and the dichotomization between theoretical and pretheoretical, or between fiduciary presupposition and intellectual hypothesis, is a mere tool for analysis. The foundational assumptions and categories of the first two layers, that the first group of worldview theorists discuss, are inevitably present in the worldviews of all human beings. However, in the broad sense that I use the term worldview, it also includes theoretical beliefs that may be speculative suppositions, hypotheses, conjectures, and ideas, as well as presuppositions and assumptions. It is plausible that presuppositions are more entrenched into the psychology of an individual than are speculative ideas, although the latter may still be, or become, important. What starts out as a belief that is initially peripheral to the worldview may, on account of its corroboration by experience, its usefulness, and its
consistency with the foundational assumptions of the worldview, become a new foundation for thought and action that sinks deeper into the worldview over extended periods of time. Thus, the worldview grows increasingly complex and encompassing, at least in the case of effective psychological adaptation, as a result of experience and reflection upon experience, intellectual scrutiny of systems of belief, development of personal intellectual constructions, or adoption of sets of belief as a result of attraction to features of these beliefs, such as experienced consistency or resonance with the worldview, or of other motivational forces. To separate worldviews into conscious and unconscious parts is also problematic. Worldviews develop through the interplay between what Polayni (1962) has called subsidiary and focal awareness. At any given moment in time, most of the worldview is bound to reside in subsidiary awareness and thus to affect thought and action through automatic processes. It is however plausible that an individual can, through persistent effort, become focally aware of most of his or her worldview, and thus affect its impact on thought and action through controlled processes. (see Kunda, 1999). But, many worldview theorists doubt that the most basic presuppositions can ever be challenged, changed, and replaced, or even revealed to awareness through controlled processes (see Naugle, 2002).

Describing the components with intentional terms. Some worldview theorists (e.g. Naugle, 2002) describe worldviews as semiotic structures, whose components are signs that can be constructed, manipulated, and communicated. Others (e.g. Gabora, 1999) describe them in terms of memes that evolve through cultures by replicating themselves through individuals. These types of characterization may be appropriate when the focus is on elaborate or cultural worldviews. What we need, however, in order to describe the worldviews of individuals, is intentional terms, such as belief, fear, desire, love, hope, and so on. Regardless of the true nature of those psychological states and events that intentional terms denote (some philosophers even doubt that intentional states and events really exist, see Maslin, 2001), the usage of these terms seems to be a precondition to having a serious scientific psychology of consciousness at all.

That aspect of an intentional state or event (i.e. a psychological state or event that is characterized with an intentional term) which is about, or directed at, the world is its intentional content, and its mode of directedness can be called the attitude to the content. An intentional content is derived from causal interaction with the world and from relationships to other intentional states and events (see discussion in Searle, 1983). Thus, for example, I can acquire an intentional content that is about, or that represents, ice-cream through seeing, touching, and
eating ice-cream, and by connecting it to other beliefs and desires and so on, and if I like it I will probably acquire an attitude of desire toward that intentional content. Because this terminology is very general and ontologically austere, we can use it without having to assume much about specific mechanisms of representation or about the ontological status of intentionality more generally.

Now which specific intentional terms should we make use of? Ideally, we should make use of the full spectrum of intentional terms in order to be sensitive to nuances in the attitudes that people hold to their intentional contents. The present research, and much of the previous research on aspects of worldviews, does however, for the sake of simplicity, focus on beliefs and values. The term belief is more general than other similar terms, such as attitude, assumption, and presupposition. The two latter terms are generally used to indicate that something is taken for granted and acted upon as if it is true, although this something is not certain. They also often imply a high degree of conviction. In contrast to this, the degree of conviction in different beliefs varies substantially, from the slightest hunch to the conviction of absolute certainty. The concept of attitude, on the other hand, is generally used to imply an evaluation of something, or just a feeling associated with it, and an associated disposition to action. The attitude to the intentional content, on the present analysis, is a more general concept, because it encompasses all modes of directedness, including also non-evaluative belief. Moreover, the attitude of belief may be combined with other attitudes, such as dislike or fear. Worldviews are in fact so heavily imbued with emotion that it may be extremely difficult to distinguish some of the beliefs from emotional structures that are also embedded within the fundaments of the worldview (see discussions in Rokeach, 1960, 1968; Tomkins, 1963, 1965; Westerlund, 2001; Kelly, 1955). Rokeach (1960) distinguished between a descriptive belief that something exists or that it has a specific property or relation to something else that exists and an evaluative belief that judges this as good or bad, thus roughly dividing the emotional attitudes that are concomitant to belief according to the approach-avoidance distinction. He also added a third category of belief, called prescriptive belief, about which events and end-states are desirable and undesirable, in order to account for values. I am however reluctant to classify values as a type of belief, because it is far from clear that a value per se is, or entails, a belief; this is a matter of heated philosophical dispute. But values are nonetheless expressed in belief systems and can therefore be inferred from belief.
systems. Therefore, belief is the central concept that I have worked with in this research, and it is the one that I will analyze a bit closer.

The assessment of belief is complicated not only by the complex intermingling of attitudes to the contents, but also by the fact that the intentional contents derive their identities partly from relationships to each other. This forces us to accept some imprecision and approximation when we want to compare the beliefs of different persons. Psychologists often solve this by letting people indicate the extent to which they agree with a given statement, thus putting the beliefs on an equal scale while disregarding some of those idiosyncracies that result from the way that the beliefs are embedded within different systems of beliefs. When we take into account the vagueness of language, we need to be aware that the reported degree of agreement may reflect either the strength or the conviction of the belief – a distinction which is analogous to the distinction between effect size and significance in psychological measurement. For example, when a person is asked to what extent he or she agrees that human beings generally act out of egoism, the answer may be the result of a belief that many or that just a few human actions are motivated by egoism, which is what I mean by belief strength – it reflects the strength of the actual proposition that is believed. The conviction of the belief, on the other hand, is the conviction with which a given proposition is held to be true. It indicates the extent to which the proposition at hand is important to the person who is confronted with it. The distinction between strength and conviction reflects important psychological differences that may become conflated in psychological measurement. Although it can be tricky to take into consideration in psychological measurement, it is important at least to be aware of it.

Another difference in how beliefs are held is, as Rokeach (1960) emphasized, that they are rooted in different sources. A belief can be called intrinsic if it is based on intrinsic properties of the information that are evaluated in relation to the worldview or extrinsic if it is derived from an esteemed authority. In connection with this, it may be helpful to delineate a further type of belief, namely beliefs concerning the trustworthiness of the sources of other beliefs. These sources may be other persons or even direct sense data.

Beliefs can also be said to vary in the extent to which they are general or specific. This means that a general belief consists of, or entails, more specific beliefs that in turn consist of more specific beliefs and so on. For example, a belief in an entire religion is extremely general as it
consists of myriads of more specific beliefs concerning metaphysics, epistemology, morality, and so on.

A concomitant to this is that beliefs, as Harvey, Hunt, and Schroder (1961) suggested, differ in the extent to which they are vague or precise. The vagueness of a belief increases with generality and lack of differentiation between the more specific constituent beliefs. For example, a belief in an entire religion that cannot be differentiated into smaller components is extremely vague.

Several researchers (e.g. Harvey, Hunt, & Schroder, 1961; Schroder, Driver, & Struefert, 1967) have held the extent to which a belief is concrete or abstract as the single most important property of a belief, because abstractness leads to transcendence of stimuli and a constructive character of human belief systems. A highly concrete belief is close to actual experience and is therefore highly circumscribed by the limits of reality. A more abstract belief, which is further removed from experience, can be more freely determined by the psychology of an individual. Therefore the highly abstract beliefs about things such as free will, human nature, and the meaning of life should strongly reflect the psychology of the individual. These highly abstract beliefs are undergirded by more concrete beliefs about actual human beings and about agency and meaning in life of the self and others. The possibility for construction makes it possible to for example hold a positive view of human nature and a more negative view of actual human beings, with the claim that people in general fail to actualize their positive inner nature. Psychologists have however almost exclusively focused on the beliefs that people hold about their own lives and concrete reality, rather than the more abstract philosophical beliefs that are also important parts of the worldviews.

Finally, some researchers (e.g. Brownlee, Boulton-Lewis, & Purdie, 2002) have applied the terms naïve and sophisticated to the contents of beliefs. I will however not apply this distinction to beliefs, because I find it more appropriate to use these terms to refer to the process through which a belief has been developed and to the reasons, constituted by the person’s existing belief systems, that he or she has adopted the given belief. For example, the fact that a given belief is consensually accepted within a scientific community does not mean that it is held in a sophisticated way in all worldviews.
The interconnectedness of the worldview components

Worldview theorists commonly emphasize that the components of a worldview are interwoven. Metaphors such as web, fabric, tapestry, system, structure, framework, and gestalt permeate discussions of and definitions of worldview (see Naugle, 2002; Sire, 2004; Gabora, 1999; Aerts et al., 1994; Rokeach, 1960). Nearly five decades ago, Rokeach (1960) reacted upon the narrow focus on specific beliefs, attitudes, and values within psychology and emphasized the need to take entire systems of belief into consideration. He claimed that the general properties of belief systems should be in focus, divorced from specific ideological content, so that researchers can probe into the psychological structures that underlie the beliefs. For example, he construed authoritarianism as a general property of belief systems, rather than as a set of beliefs that are tied to right-wing politics, claiming that beliefs that are on the surface antiauthoritarian in their content may be held in an authoritarian way. Rokeach’s research suggests that what beliefs are held is often not nearly as psychologically important as how they are held, that is, their functional role in larger belief systems.

The evolutionary roots of an interconnected worldview. Early in the process of biological evolution, the human mind was like the mind of a primate, in encoding each item as a separate, self-contained, and fixed episode that could only be accessed by stimulation from external cues. The evolutionary transformation of the early human mind into the modern human mind involved the acquisition of an ability to manipulate and invent symbols and abstractions. This ability permits the modern human mind to link together strands of experience in the creation of a coherent internal model of reality. Such a worldview is tremendously useful in responding to the requirements of life. But, the increased complexity also engenders problems. One problem is that it may lead human beings astray from the actions that would most benefit them when thoughts diverge from basic biological concerns. In the perspective of evolution, culture is a fairly recent advent, and therefore, human worldviews may provide unreliable representations and incitements for action in the cultural sphere. The biological substrata of human worldviews have instead largely been tailored by thousands of years of evolution in environments of hunting and gathering (Gabora, 1999; Gärdenfors, 2000).

The increased complexity of the worldview also opens up the possibility for inconsistencies to emerge. This includes not only outright logical fallacies, but also inconsistencies in the perception of self and other that may be psychologically difficult to resolve. Developmental
Psychologists have studied the latter type of inconsistencies as they emerge upon the development of, and are resolved by, more advanced cognitive abilities. For example, one strenuous problem for an adolescent is to reconcile attributes that seem to contradict each other, for example in having opposite valences, although they are associated with the same person. This leads to the development of abstractions of higher order that provide a more nuanced differentiation and integration of different attributes. However, the complexities of social phenomena and the unreliable human representations of them may make the worldview prone to develop a proliferation of inconsistencies in this area even after advanced cognitive abilities have been developed. This may lead to unpleasant feelings of cognitive dissonance, confusion, and fragmentation (Harter, 1999; Cole & Cole, 2000; Gabora, 1999).

The motivation to revise the worldview. Psychologists have often noted that the negative feelings that inconsistencies create incite some kind of change in the worldview to balance the cognitions. Social psychologists have explained attitude and belief change in terms of the principle of *cognitive balance* in associationist networks. Imbalance emerges when opposing attributes become linked with the same concept, especially if they have different valences. The self, and its assumed positive valence, is central in these theories in the explanation of attitude and behavior change. For example, if a person becomes aware of a connection between a behavior that is viewed as negative and the self which is viewed as positive, the striving for balance will prompt the cognition about the behavior to change, because the self and its valence is not easily change. The cognition can be changed either by changing the valence of the behavior or by changing the actual behavior so that it is no longer perceived as being connected to the self (for detailed accounts, see Festinger, 1957; Greenwald, McGhee, & Schwartz, 1998). In Rokeach’s (1968, 1973) elaboration of these ideas, he claimed that the focus must be moved from attitudes to values in order to identify genuinely lasting changes in attitudes and behavior. According to him, the ephemeral changes in opinion and behavior that social psychologists had typically found were superficial, because they were not rooted in the actual reorganization of values. Instead, he believed that true changes would be rooted in the human striving to connect the self-concept with desirable values, because such values underlie more specific attitudes that are tied to different situations or objects. The experiments that Rokeach devised to support his claims did demonstrate striking changes that persisted even after almost two years.

This principle of cognitive balance does however apply, at least mainly, to the rudimentary
associationist networks. But it should be possible to extend so as to include also the more advanced forms of thinking. So, more generally, human beings can be said to strive for coherence in the worldview as a whole. A strong human striving for coherence in the worldview can be explained in terms of evolutionary theory as an adaptive mechanism, because coherence makes the worldview useful (see Gabora, 1999).

Worldview revisions and revolutions. Gabora (1999) has discussed different ways of dealing with worldview inconsistencies. According to her, the common solution is to make a concept more general so that it can include more instances, to invent new abstractions, or to use metaphors. But sometimes, when inconsistencies abound, such a solution will not suffice. In such a situation, a large-scale revolution of the worldview may be required, just like Kuhn (1962/1996) famously showed that science sometimes progresses through revolutions. According to Gabora, this should make the relationships between the components of the worldview temporarily loosen up so that new insights can percolate through the worldview and change it as a whole. Thus, a more consistent and fruitful worldview can fall into place, stabilize, and anneal. These revolutions may be especially prevalent in childhood, when the ability to manipulate and invent symbols is developed and useful abstractions such as schemas and scripts are acquired. A possible example for a worldview revolution in adulthood is what happens when people confront trauma. According to Janoff-Bulman (1992), all human beings normally assume unconsciously that the world is benevolent and meaningful and that the self is worthy. This worldview provides a sense of stability, safety, and security that is at least partially illusory. Upon confrontation with trauma, these assumptions are challenged or even shattered, and either reality must be denied or the worldview must be rebuilt. However, the revolution of a worldview is a last resort only, because it makes the worldview vulnerable. Allowing an alien element to penetrate deeply into the worldview may cause disruption of the harmony in the belief structure, damage to the ego, or other consequences that threaten survival. Children develop mental censors to ward off dangerous beliefs so that these beliefs are isolated from, instead of integrated into, the rest of the worldview. Therefore, dangerous beliefs are unlikely to become activated and when they are nevertheless activated they are dwelt on excessively. Gabora defines repression as extensive censoring. The activation of dangerous thoughts is also inhibited though a process called deception. The processes of repression and deception combine to fragment the worldview and to disrupt its balance (Gabora, 1999).
But, there are many different possibilities of adjusting a worldview to experiences that prompt a change of it. Rokeach (1968, 1973) emphasized that it is important to know which attitude has really changed, because there is always more than one attitude at issue in the assessment of an attitude change. In a Quinean (1953) vocabulary, the boundary conditions of a worldview are constituted by experience. This means that beliefs that are in the periphery of the worldview are close to experience and can be readily falsified by it without affecting the rest of the worldview. But, beliefs that are in the centre of the worldview, far from experience, do not correspond to any specific sense data. According to Quine, this means that the worldview as a whole, and not singular beliefs, has empirical content, and thus the worldview is revised as a whole. So, there is a choice as to what beliefs to revise, and this choice is decided by some kind of centrality of the beliefs. For Quine, centrality appears to be mainly a matter of how abstract a belief is. But, abstractness is not alone sufficient to explain all belief revisions, although abstract as well as general beliefs should be less inclined to change than concrete and specific beliefs. The most abstract beliefs and, the most general beliefs in their entirety, are simply seldom at issue. But, if a very abstract belief would nevertheless be at issue it may, if it is relatively unimportant, readily change on account of its coherence with other more important beliefs. Another important property of the belief is its depth, which can be thought of as how close to the fundaments of the worldview it is or how many other beliefs it rests upon. A very deep belief is likely to form the hinges, or premises, for many other beliefs. But, to explain belief revision it is also necessary to take into account how pragmatically important a belief is, which includes the importance of all the beliefs that change with it. We may say that some beliefs are more entrenched within the worldview than others, that is, they are less likely to become revised because of their pragmatical importance. The most entrenched beliefs reside deep within the worldview and form the fundaments for, and hinges of, many other potentially useful beliefs. The entire worldview would be affected if these beliefs would change, that is, their revision would require a thorough worldview revolution. Rokeach (1960, 1968) has demonstrated that extrinsic beliefs are easier to change than beliefs about the sources of the extrinsic beliefs and, even more so, than intrinsic beliefs, which should reflect their different degrees of entrenchment. Entrenchment should also be related to conviction, because the individual must trust in the entrenched beliefs. Moreover, because entrenchment is a matter of degree, the revisions of all beliefs that have some degree of
entrenchment can be described as revolutions of different sizes (see Gabora, 1999; Naugle, 2002).

These discussions strongly make it clear that beliefs, other than disparate episodic memories, must be formed within a worldview. This has also been demonstrated in educational research, where a vital distinction between deep and surface approaches to learning has emerged (see Marton & Booth, 2000). A deep approach incites attempts to form relationships between the information that is to be learnt and concepts within the worldview and thereby to integrate it with deeper parts of the worldview. A surface approach, on the other hand, leads to attempts to rote memorize the information as it is, with its connections to the worldview left unelaborated. Deep approaches lead to markedly more efficient learning. Furthermore, the coherence of the relationships between the learnt material and the rest of the worldview is paramount for the material to be effectively stored. Fragmentation is associated with poor memory (Marton & Booth, 2000).

The openness and closedness of a worldview. As Rokeach (1960) has demonstrated, there are also differences between worldviews in how the components are interrelated, and consequently, in how they are revised. Rokeach first made a vital distinction between what I will, in order to avoid confusion, call the probelief system and the antibelief system. The antibelief systems are rejected, rather than simply not believed. Some propositions may be simply psychologically irrelevant for a person, whereas other propositions may be as psychologically important to reject as others are to endorse. The antibelief system is further divided into subsystems, with different degrees of similarity to the probelief system, that correspond to different outgroups. People tend to reject, and consequently form antibelief systems of, belief systems that are highly incongruent with their own probelief systems, developing prejudice toward other persons who hold such belief systems. Rokeach provocatively claimed that this type of prejudice is so strong and widespread that incongruence between systems of belief may de facto be the underlying cause of all prejudice, including ethnic and racial prejudice. Moreover, Rokeach theorized that the belief systems differ in isolation, differentiation, and time-perspective. According to Rokeach’s theory, isolation is the result of the human need for consistency. This means that different beliefs may be isolated into different compartments of the system if they seem to contradict each other. Differentiation is expressed in sheer amount of knowledge, richness of detail, and articulation of the probelief and antibelief systems per se and of the similarities and differences between them.
Time-perspective varies from a narrow overemphasis on the past, present, or future, without adequate appreciation of the continuity between them, to a broad representation of past, present, and future and their interconnections.

Rokeach next tried to scout how these general properties of belief systems are related to thinking in the form of information processing. He was interested in the unreliable sphere of social and cultural information than hinges upon the authority of other persons, rather than the sphere of direct sense experience that hinges upon the authority of the senses. He claimed that there is, in the structural aspects of the worldview, a common origin behind the endorsement and rejection of persons, ideas, and authorities that psychologists have not appreciated. At the initial sifting stage, people may physically avoid contact with people, books, and ideas that they know may threaten their belief systems, and they may reject information that is radically incompatible with their most entrenched beliefs. But, the information that nonetheless passes through this sieve must be reconciled with the probelief system. According to Rokeach, there are two different types of psychological motives, namely understanding and representing the world on the one hand and warding off anxiety and threat on the other hand, which incite different strategies of reconciling information with the probelief system. All belief systems range on a continuum from open, that is, being dominated by the former type of motive, to closed, that is, being dominated by the latter motive. Openness and closedness is a result of both deeply entrenched beliefs about whether the world is in general a friendly or threatening place, which originate in childhood experiences, and situational evocations of threat. An open belief system does in its extreme correspond to the self-actualizing person of humanistic psychology who is open to experience and focuses on integrating information into the belief systems in the formation of intrinsic beliefs. This person is free to receive, evaluate, and act upon information that is relevant to the requirements of different situations on its own merits, resisting external pressures for reward and punishment for processing information according to the wishes of authorities, and to be driven by inner self-actualizing forces rather than by irrational inner forces. This person can also separate the information from its source and evaluate the reliability of the source. A closed system does in its extreme correspond to the totality of Freudian defense mechanisms that censor, contort, and contaminate information with isolated bounds in order to ward off information that is seen as threatening to the probelief system. A person with a closed belief system is driven by internal pressures, such as needs for power, self-aggrandizement, and allaying anxiety, irrational ego
motives, and unrelated habits beliefs, and perceptual cues, and external pressures of reward and punishment from external authorities, such as parents, peers, and other authority figures, reference groups, and social institutions. These pressures are largely irrelevant to the merits of the information per se, and still a person with a closed belief system cannot separate them from the information. The beliefs of closed systems tend to be extrinsic.

The extent to which a belief system is open or closed has important consequences. Many beliefs in closed systems are related to each other through their common origin in authority, rather than by virtue of intrinsic connections, which leads to isolation in the probelief system and between the probelief and antibelief systems. Therefore, people with closed belief systems may fail to see contradictions and become trapped within their belief systems even when these are clearly inadequate. They simply do not take new belief systems seriously, rejecting them altogether or failing to entertain them and to remember the parts that should become synthesized with their own belief system. It is important to note that the previous discussion of belief revision must be modified so as to include the operation of closed systems. Because a closed belief system contains many isolated bounds, fragments of a closed belief system may be revised without the entire belief system having to adjust. Instead, the connections between the isolated regions depend upon the belief systems of authorities, which are often swallowed down in their entirety. Not only do persons with closed belief systems endorse or reject information on basis of authority; they also accept or reject other persons on basis of their authority or on the similarity between their belief systems and the belief systems professed by authorities. Persons with open belief systems can, on the other hand, accept others and value them positively without evaluating their beliefs, as they are able to separate beliefs from their sources. As for time perspective, persons with closed belief systems tend to be preoccupied with the future, because the anxiety they want to ward off is primarily focused on the unknown future, whereas persons with open belief systems have a broader focus on past, present, and future, where the immediate future is used to confirm or disconfirm predictions about the present. Rokeach (1960) also postulated further links between conceptual, ideological, perceptual, and aesthetic systems and presented many empirical demonstrations of the power of this theory.

Narrative interrelations. There is no doubt that the components of a worldview must be interrelated in some psychological way that can be described by concepts such as consistency, coherence, openness, and differentiation. Naugle (2002) has emphasized also that these
psychological interrelations have a very important narrative element. According to Naugle, the narrative element of a worldview is crucial, because it is a requisite for the establishment of an overarching interpretation of reality and framework for life that solves the riddles of existence, that is, it is crucial for the worldview to fulfil its very purpose. Moreover, narratives are central to communication between human beings and shared narratives form the adhesive that unites people in cultural groups. Many other scholars have also emphasized the centrality of stories in personality. But the terms story and narrative are often used so vaguely that the conclusions are dubious. A story does, in the weakest sense of the word, specify some kind of serial relationship, or linear connectedness, between events or states of affairs. This sequential ordering is often supplemented with assumptions about causal relationships between the items and human actors are also generally included (see McAdams, 1999; Christman, 2004). At the most concrete level, stories may be a part of personality in the sense that episodic memories automatically coassemble into storied scripts, as Tomkins (1963, 1965) claimed. But, many theorists emphasize that stories can also actively constructed at higher levels of abstraction that must involve the manipulation of symbols and semantic memory. According to McAdams (1999), stories constitute an integrative force in identity formation from late adolescence and onward, as the creation of a life-story becomes central. These more abstract stories clearly do not hinge only upon the more concrete stories, but also upon deeply entrenched beliefs that are not connected as stories, such as beliefs about the general nature of the self, the other, and the surrounding world and general semantic knowledge. So, there are undoubtedly important parts of the worldviews that are not stories. McAdams claim is, however, that stories constitute the part of personality that creates unity, purpose, and coherence. The general problem is that this type of usage of the word story seems to conflate story-elements of coherence with coherence in general. It seems entirely possible that the structure of the experiences of a person can coalesce into a coherent unity without being converted into narrative form; many other structures of logical relationships are possible (see the argumentation in Christman, 2004).

It seems that the strong emphasis of some researchers on the narrative elements of the worldview is a result of focusing on symbolic communication as the hallmark of human culture and consequently construing worldviews as semiotic phenomena. But if we focus on the worldviews of individuals, we must be a bit careful in attributing narrative structures to their worldviews – an aspect of a worldview may be expressed as a story, or the expressions of a
worldview may be interpreted as being a story, without the actual aspect of the worldview constituting a story. The expression of a worldview always depends on the situation and cultural context. In fact, it is often claimed that narratives cannot be separated from cultural context and community of interpreters (Christman, 2004; McAdams, 1999). This would disqualify the scripted experiences, and any other parts of the worldview that do not involve symbolic representations, from being called stories. Moreover, the dramatic postmodernist claim that there is a cacaphony of selves with different voices that is responsible for the substantial changes in life-stories over time and contexts, may simply reflect a failure to appreciate the extent to which story-making is a function of a specific communicatory situation (see McAdams, 1999; Rokeach, 1968). Stories are often generated from a worldview upon attempts to reach self-awareness and to elaborate and express and formulate parts of the worldview in words and they may be generated. But they can also simply be assimilated, from myths, legends, novels, and folktales that are prevalent in culture. The latter case has been emphasized by worldview theorists such as Wittgenstein (as cited in Naugle, 2002) and Tomkins (1963, 1965).

Stories may also be generated upon attempts to obtain a sense of coherence and meaning in life. But the claim that stories are necessary, or that they are even effective, in providing a psychologically satisfactory solution to existential problems can also be disputed. This may as well be an artifact of the contemporary postmodern culture, rather than a universal phenomenon. The central role of story-telling in Western societies, involved in the construction and expression of selves, may very well be argued, from an Eastern perspective, to be symptomatic of excessive individualism, self-preoccupation, striving for self-esteem, and the dominance of self-presentation concerns. For example, a Buddhist may claim that stories, or other self-centred ways of attempting to categorize a reality that cannot be categorized with such symbolic thinking, must be dispensed with for a person to reach enlightenment (see Eliade, 1969; Revel & Ricard, 1999). The idea that true knowledge or wisdom is beyond the type of language that stories represent has also been put forth in Western philosophy (e.g. in Existentialism, see Kauffman, 1975). Indeed, research has shown that some persons are optimists although they do not even appear to need a larger system of meaning (Westerlund, 2001), and therefore they should, by implication, not need a story-based system of meaning.

The extent to which narrative elements are important to take into account depends upon which worldview, or which aspect of worldviews, we are interested in. Some worldviews or some
aspects of a worldview may be best described as a set of stories, as in Naugle’s theory, others may be best described as intellectual systems, as in Freud’s theory, and still others may be best described as emotional experiences that may become obscured upon attempts of verbalization, as in Jung’s theory. There may very well be big individual and cultural differences in the psychological importance of narration and in strategies of narration. Pennebaker and his colleagues (e.g. Chung & Pennebaker, in press) have studied some such differences in narration, and they have found that the ability to form good narratives is, at least in Western societies, strongly linked to physical and mental health. Good narratives seem to use the abstract third person perspective rather than the self-centred first person perspective that is tied to episodic memories, and therefore they can readily become integrated, and interwoven, with the rest of the worldview. They also provide effective organization and storage of memories, and they may make emotional effects of experiences more manageable by facilitating a sense of resolution. This suggests that different types of story-making can reflect either healthy adaptation and/or neurotic tendencies. However, it is important to note that this type of narrative is still relatively close to the periphery of concrete experience. It is used to organize experiences rather than to provide foundational answers to existential questions.

The psychological functioning of worldviews

In the following section, I will put forth a simple classification of some psychological functions that can be ascribed to worldviews on the basis of worldview theories. However, presenting something like a complete theory of the psychological functioning of worldviews would require much more work, because this would require me to show how all those kinds of motivation that psychologists study can be explained in terms of worldview functions and to derive the functions carefully from an evolutionary account. We would also have to confront the possibility of there being indeterminacy in the functional ascriptions. Nevertheless, the following characterization offers a tentative framework from which to understand worldview functioning.

The practical function. Many worldview theorists emphasize that the worldview has such an important psychological function that a human being is unable to function effectively, or even to function at all, without a worldview; to have a human worldview seems to be a crucial part of what it means to be a human being, or at least a human person, rather than a more biologically primitive organism. Human beings have a basic need to organize the personal experiences and to
represent the world mentally in a worldview. I will call this the practical function of a worldview. The worldview constitutes a necessary substratum for thinking, it provides predictions about the world and guidelines to action, and it provides a guide to life. In this sense, a worldview is necessary for survival. Even Wittgenstein, who believed that there is no non-linguistic world, had to concede that human beings need representations of the linguistic world in order to participate in its activities, culture, and symbolic world. Many theorists do however believe that there is a non-mental and non-linguistic world, and consequently they see a worldview as a map that is used for orientation in the world (see Naugle, 2002; Koltko-Rivera, 2004; Aerts et al., 1994).

Early in the history of psychology, a human being was largely viewed as a passive receptor of environmental stimuli whose representations are roughly copies of, or responses to, the world. Kelly (1955) reacted to this dominant view and instead portrayed human beings as lay scientists who actively and creatively construct mental representations in order to be able to predict and control the world. Today, psychologists, philosophers, and cognitive scientists alike acknowledge that there is a constructive element in human representations of the world, as the components of a worldview are psychologically interwoven instead of being separated copies of different parts of the world. This far, Koltko-Rivera’s (2004) theory is the most thorough attempt to create an integrated theory of the psychological function of worldview as related to both experience and action. This theory divides the process of experience into four steps that a stimulus passes through: (1) basic psychophysiological processes of sensation, (2) the acculturation buffer, which contains the modes of valuation and expression of different cultures that a person is committed to, (3) the worldview, which consists of assumptions and beliefs about reality and life, and (4) the perceptual or conceptual core, where the self experiences the percept as gestalt and a concept is formed about the meaning of the stimulus. In an analogous way, the process of action is also divided into four stages: (1) the motivational core, which drives the system, (2) the worldview, which lays out a sense of what should be done to act upon the impulse and of how this may be accomplished, (3) the agentic core, which is the locus of personal will, (4) the persona and cognitive processes, which color the choice with the individual’s personality. In light of the preceding discussions, these stages do not seem to be at all as separable as Koltko-Rivera’s theory suggests. In fact, the worldview permeates most, if not all of these stages, unless the worldview concept is used in a very narrow sense. For example, the acculturation buffer should clearly be subsumed under the concept of worldview. The fact that it is originated in culture does
not set it apart from the rest of the worldview. Wittgenstein (as cited in Naugle, 2002) can even be said to have identified this buffer with the worldview. Also, a concept is not formed in a perceptual or conceptual core that is separated from the worldview, because the concept is formed within the worldview as a part of the whole system that is connected to other parts of the system. When it comes to the process of action, the most obvious deficit in the model is that motivation does not always precede the worldview, if it is even at all separable from the worldview. Deeply entrenched foundational beliefs do most certainly give rise to motivation, for example in the way Rokeach’s (1960) research suggests. If it is de facto possible to distinguish all of these stages in the processes of experience and action, then Koltko Rivera must specify the ways in which the worldview functions at each stage.

From an evolutionary perspective, the usefulness, or survival value, of the worldview is paramount. The evolutionary advent of the interconnected human worldview did give human beings a tremendously powerful way to view the world that could partly compensate their limitations in cognitive capacity. But, a more encompassing and useful worldview also engenders more inaccuracies (Gabora, 1999). For example, social psychologists have often noted that people’s beliefs and belief systems tend to persist in spite of the presence of evidence that should propel a change, that is, people seldom have completely open belief systems (Rokeach, 1960; Kunda, 1999). This can be explained in terms of the practical function of a worldview. If a worldview were to become updated in line with every new experience, it would no longer be useful, because it would no longer provide the coherent and stable guide to life that is necessary for survival. In such a case, the owner of the worldview would essentially be back at the primate stage with a collection of largely disparate but accurate memories whose usefulness are strongly restricted by limitations in cognitive capacity. Even a somewhat coherent worldview that abounds with inaccuracies may be more useful than a more accurate worldview that has not yet become integrated to form a coherent worldview (see Lester, 2000; Gabora, 1999). This is analogous to supplying scientific hypotheses with a Lakatosian protective belt, if the research program - that is, the worldview analogue - is fruitful, in order to avoid premature falsification.

The preceding considerations have important implications for Rokeach’s (1960) theory, because they suggest that an adaptive worldview is neither completely closed not completely open. A slight degree of resistance to change may in fact be a requisite for survival rather than a mere symptom of a motivation to ward off threat. There may be different types of resistance to
change. Furthermore, as Rokeach (1960) does in fact note, the tendency of psychologists to refer to resistance to change with negatively connoted concepts, such as dogmatism, rigidity, conservatism, and denial, is unfortunate. Change and resistance to change may both represent healthy or unhealthy responses to the events of life (Rokeach, 1960).

The existential function. In contrast to more primitive beings, human beings also have the ability to become aware of and contemplate their own existence, which is of utter importance to human life. Therefore, many worldview theorists have emphasized that a vital part of the function of a worldview is that it may answer the existential enigmas and thereby provide a sense of meaning and purpose in life. I will call this the existential function of a worldview. The existential function of a worldview dominated worldview philosophy from Kierkegaard to Husserl. Heidegger later came to distinguish explicitly between the practical and existential function of a worldview, claiming that philosophy must provide wisdom of both the world and life. Anyway, the acknowledgement of an existential function of a worldview is closely intertwined with the focus on elaborate worldview. Whereas theorists who focus on the practical function of a worldview tend to focus on the pragmatically important foundational assumptions, theorists who focus on the existential function tend to see the fulfilment of this function as a quest for wisdom. The depiction of worldview construction as a personal project is tied to a focus on existential questions of a personal nature. For example, Kierkegaard focused on questions concerning the self, conditionality, and freedom. The depiction of worldview as a collective construction is, on the other hand, naturally related to existential questions that human beings share. For example, Dilthey focused on questions about the origin, action, purpose, death, and destiny of human beings (Naugle, 2002).

Whereas the practical function of a worldview is necessary for physical survival, the existential function seems to be crucial to psychological adaption and health. 20th century existentialist thinkers, such as Maslow and Frankl, have emphasized the human need for a worldview in order to experience meaning in life. Freud also believed that an effective worldview, that could satisfy all interrogation and solve all problems, could provide peace of mind and security (see Debats, 1996; Koltko-Rivera, 2004; Naugle, 2002).

The epistemic, guiding, protective, and affirmative subfunctions. The practical and existential functions can be further divided into at least four different subfunctions. The epistemic subfunctions correspond to the need for representation and answers to existential questions and
the *guiding subfunctions* correspond to the need for guidance as to how to respond adaptively to the environment and how to be a contributing actor in a purposeful universe. The functions that I will refer to as the *protective subfunctions* of a worldview can also be subsumed under both the practical and existential function, because both practical life and the existential reality can give rise to feelings of threat.

Because the existential dimension of human thought can be frightening, a worldview has a vital coping function. Dilthey believed that the inescapable reality of the cruelty and transitoriness of life and the certainty of death can be dealt with simply by finding answers to the existential riddles. Other theorists have claimed that the worldview must function as protection against the terrifying reality. According to Jaspers, all human beings encounter what he called boundary or *ultimate situations* where they experience the conflict, suffering, guilt, and death, which life inevitably contains. In order to protect themselves against the horrors of these ultimate situations, they must seek security or grounding in a *protective shell* and dissolve the one which was previously self-evident. Thus, a successful adaptation to the encounter with ultimate situations involves regular worldview revolutions where one shell is replaced with another. Jaspers was interested in describing individual differences in the way human beings seek security to be able to help them to find new shells. Berger and Luckmann have developed this idea further, applying it to both individuals and entire cultures. According to them, human beings cannot survive, let alone thrive, in the chaotic environment of an unconceptualized world. In order to avoid the exposure of absolute nothingness and a subsequent encounter with nihilism, human beings need a stable symbolic world, or what Berger and Luckmann called a *sacred canopy*, to cover the brutal facts of reality (Naugle, 2002). Some contemporary psychologists have also emphasized this idea, formulating it in terror management theory. According to this theory, the worldview is a central component of the human mechanism of coping with existential anxiety and threat. When a worldview encounters a boundary situation, specifically when mortality is made salient, its fragile contingency upon external validation is revealed, and it must be defended against dissidence. Therefore, people often dismiss and rationalize the criticisms of, and even derogate, individuals with dissenting worldviews, especially when mortality is made salient. People may even resort to aggression to fend off threats to their worldview. Other possible strategies of worldview defense are trying to convert other people’s points of view, so that they become assimilated to one’s own worldview, and accommodating one’s own worldview.
so as to include compelling components of other worldviews (McGregor et al., 1998).

Rokeach’s (1960) description of the closedness in the worldview applies to the practical side of the protective function. According to him, the human reaction to the threats of practical life is to close up the worldview. Moreover, recent studies of the nature of defensive self-esteem have shown that some individuals also react to such threats with compensatory zeal in their convictions (e.g. McGregor & Marigold, 2003).

Because the worldview ultimately hinges on foundational assumptions that cannot be proven from within the worldview, the individual may sometimes need to experience that it is affirmed by the environment or from divinity. The functions that I will refer to as the **affirmative subfunctions** can be regarded as auxiliary functions, because they affirm that the other functions work properly. This affirmation pertains to the most important, or entrenched, parts of the worldview at large, although Western psychology has focused upon affirmation of the self. The need to affirm the worthiness and general goodness of the self is regarded as a powerful superordinate motive in psychology. People have been found to engage in a wide variety of strategies for *enhancing* and the self and maintaining its worth, especially in comparison to the other. Individuals that do have high self-esteem tend to seek out and approach direct opportunities for affirming their self-worth. Low self-esteem individuals, on the other hand, more often resort to the protective function of the worldview by avoiding dangerous situations where the accomplishments of the self are exposed. Instead, they tend to seek shelter in ingroups and boost self-worth through enhancement of these groups (Kunda, 1999). However, questions about whether, or under what circumstances, this type of self-esteem affirmation is adaptive and conducive of well-being are actively debated in psychology. Some researchers have claimed that it is a universal and adaptive mechanism which is required for the protection from existential terror (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004), whereas others have claimed that it is a contingent result of an individualistic Northamerican culture (Heine, Lehman, Markus, & Kitayama, 1999). Some have claimed that self-esteem is basically conducive of health if it the strategies for obtaining it fit with the environment (DuBois & Flay, 2004), whereas others have claimed it is the very *striving* for self-esteem, rather than the level of self-esteem per se, that can lead to negative health outcomes (Crocker & Nuer, 2004; Crocker & Park, 2004). The latter authors see self-esteem striving as an insecurity-rooted way of denying reality that can obstruct the epistemic and guiding functions. Thus, there seems to be a tension between the epistemic and
guiding functions, which dominate an open worldview, and the protective and affirming functions, which may take precedence in a closed worldview and for the especially entrenched aspects of the worldview. It also seems clear that self-esteem striving is worldview-dependent, because it would only make sense to demonstrate positive qualities of the self (see definition in Crocker & Park, 2004) if the worldview incorporates the belief that there is an autonomous self that has demonstrable qualities. Such a belief is often rejected in Eastern thinking (Revel & Ricard, 1999). A belief that there is a self with qualities should lead to a tendency to ascribe positive qualities to it, because a worthy self should be an indicator of successful adaptation. Moreover, the tendency to seek affirmation of the self as more worthy than the other may lead to a legitimization of social dominance over other persons and outgroups on basis of the superiority of the self and ingroups. According to Duckitt, Wagner, Du Plessis, and Birum (2002), the view of others as unworthy and inferior motivates the social dominance type of prejudice, which is based on competition with outgroups and dominance over them.

There is also a more general tendency to seek affirmation of the self as it is, with weaknesses and flaws, and not just its overall valence. People often prefer self-verifying information and modify their behavior so as to elicit such information. They tend to judge confirming information as more correct than disconfirming information and they develop positive affective reactions and approach tendencies toward persons who provide the former type of information and negative affect and avoidance tendencies toward those who provide the latter type of information. The search for verifying information often overrides the search for positive information, especially when the information does not concern attributes that are regarded as very important (Kunda, 1999; Harvey, Hunt, & Schroder, 1961). The general worthiness and positive valence of the self may be a deeply entrenched aspect of the worldview, which is especially dependent upon affirmation, and it may an important indicator that the worldview is functioning adaptively. For example, it is very likely that social dominance was adaptive during the evolutionary struggles over resources, and therefore it may be affirmed as adaptive in environments that elicit suchlike competition.

Finally, these types of affirmation can all be applied not only to the practical, but also to the existential, function. The self can be viewed as a valuable part of the universe with a purposeful existence, and the existential answers may be verified by for example religions. The dominion of the self or ingroup over outgroups can also be legitimized in an existential perspective, as for
example when theistic religions have viewed the ingroup as embraced by God or even chosen by God (see Fontana, 2003).

*Worldview therapy.* As already hinted in Jaspers philosophy, the worldview should, if it is crucial in human adaptation and psychological health, be a central focus of psychotherapy. Jung believed that an effective psychotherapeutic treatment must take the patients’ worldviews and their struggles with existential issues into account. According to him, the therapist must be able to explicate his own worldview so that he can participate in an open and mutual discussion, and a discovery of, existential issues, regardless of whether they are expressed in religious or philosophical form. Recently, Josephson and Peteet (2004) have also emphasized the importance of worldview in psychiatric assessment, diagnosis, and therapy.

The idea of philosophy as therapy was also embraced by Wittgenstein, but with quite different implications. According to him, philosophers are often agonized by pseudoproblems that only appear as problems because of the imperfections of language. Therefore, philosophers should, according to Wittgenstein, aim at clarification and elucidation of thoughts, so that pseudoproblems will not emerge. This incorporates adjusting the worldview so as to understand that human communication is merely constituted by language games and that so called truths are only social conventions, will dissolve, rather than resolve, many deceptively enigmatic philosophical problems (see Naugle, 2002; Hamlyn, 1994).

*Psychological desiderata.* Is it possible to tentatively delineate some properties that a worldview should or even must have in order to function effectively? The preceding discussions suggest some general properties. For a worldview to be maximally practically useful it must, at large, be accurate, and it must be encompassing enough to provide guidance to most of the facets of life. It must also be somewhat coherent, and not grossly inconsistent. Some inconsistency may however be adaptive if it represents an awareness of inconsistencies that may prompt worldview revolutions and subsequent increases in coherence, whereas consistency may be maladaptive if it represents extensive repression. In order to maintain its usefulness, the worldview must also be somewhat resistant to change. Moreover, human beings seem to need some mechanisms for protection against threat, at least under some conditions of living, that do not sacrifice the accuracy, scope, and coherence of the worldview more than necessary. There must be a fine-tuned balance between coherence and accuracy, between protection and accuracy, and between protection and coherence. It is however not clear whether an effective worldview also *must* be
affirmed or not. Existentialists claim that the trust in the worldview must come from the authentic self within the person (Rogers, 1961; Kaufmann, 1975) rather than from environmental contingencies. In a Buddhist perspective, genuine affirmation must also come from within the person, because the inner human nature is an embodiment of the universal spirit and its absolute truth (Eliade, 1969; Revel & Ricard, 1999). Excessive concern with affirmation as well as protection may indeed obstruct the epistemic and guiding functions. But some degree of affirmation may be adaptive for most worldviews, at least in uncertain environments.

As for the existential function, an effective worldview must provide answers to the existential questions that confer a sense of security, meaning, and purpose. For these answers to be psychologically satisfactory, the coherence relationship, along with its potential aesthetic features, is crucial. In science, theories that cohere in a beautiful way are often considered to be especially satisfactory. A beautiful coherence relationship can be described with expressions such as simplicity, elegance, harmony, symmetry, inevitability of fit, and conformity with the whole, whereas deviations that require ad hoc solutions are considered ugly (see Kosso, 2002; DeRegt, 2002). It is plausible that a beautiful solution to the existential riddles is especially psychologically satisfactory, at least for some personalities (see Rokeach, 1960).

How worldviews are expressed

Communication through language. The most obvious way to investigate people’s worldviews is through linguistic communication. Human language is inevitably a powerful way to communicate worldviews, especially when it comes to the more elaborate, conscious, and linguistic parts. But there are clear limitations as to how much of a worldview language that can be expressed in language. A first problem is that the most basic fundaments of a worldview language that can be impossible to conceptualize or even to become aware of. As Wittgenstein (see Naugle, 2002) aptly put it, the most basic assumptions that form the substratum of the worldview, cannot be doubted because they define what doubting is, or in Polayni’s (1962) formulation, any inquiry into these most basic beliefs can be consistent only if it presupposes its own conclusion, that is, if it is circular. According to Polayni, the part of person’s worldview that he or she is aware of is only the tip of an iceberg. But there are nevertheless unconscious parts of a worldview that may enter awareness upon contemplation and attempts at articulation. Although people do not have direct access to the causal connections between different mental states, as Nisbett and Wilson’s
(1977) research suggests, it is reasonable to assume that they can become aware of most of the contents of their worldviews. Anecdotal evidence suggests that different worldviews differ dramatically in articulation and that they vary in articulation internally as well. Mannheim (as cited in Naugle, 2002) has claimed that few persons have theoretically sophisticated worldviews, that is, their worldviews are largely unconscious and unelaborated. But, if a person is asked to report on what he or she believes about a given proposition and the worldview does not contain a probelief or an antibelief concerning the given proposition, then a belief about a proposition may sometimes be inferred from other parts of the worldview. Thus, an investigation of a worldview may actually transform it toward greater articulation and elaboration. In addition, it is important to note that even those areas of the worldview that unconscious or ineffable affect belief reports and therefore may be possible to infer from belief reports in an indirect way; the tip of the iceberg reflects the composition of the entire iceberg. Belief reports concerning some propositions are also affected, not only by the beliefs they are about, but also by factors that vary with situation such as mood (Frijda & Bem, 2000; Bower & Forgas, 2000) and social desirability (Brody & Erlichman, 1998). But, the extent to which such factors influence belief reports does also reflect the worldview, and may thus also reveal something about it.

Although language is clearly an imperfect avenue to worldview assessment, we can avoid at least some of its weaknesses with methodological ingenuity. One principle that we can utilize is that it is easier to identify instances of personal belief when you confront them than to define them – human beings can generally tell easily whether something falls under a concept even though they cannot tell why (see discussion in Jubien, 1997). Articulating a set of personal beliefs concerning a given subject can be a difficult and effortful process, but when a person is confronted with different possibilities of belief, he or she often reacts with an intuitive inclination to endorse or reject it. This means that a person who has problems articulating his own position on a certain issue may be aided by the confrontation with alternatives stances, for example through questionnaires or Q-methodology. According to Tomkins (1965), the propositions that a person is confronted with may resonate with the underlying affective structures that are developed early in life, if there is some kind of fit. The occurrence of resonance between the affective structures and a proposition should stimulate the formation of a probelief in the proposition, whereas the occurrence of resonance between the affective structures and the negation of a proposition should stimulate the formation of an antibelief in the proposition. This
should pertain not only to descriptive beliefs, but also to feelings of, or beliefs about, goodness, rightness, and beauty. For example, moral psychologists have shown that emotion strongly influences judgments of moral rightness (see Haidt, 2001, 2003), and research presented by Rokeach (1960) indicates that persons with an open worldview, and the concomitant affective structures, are more accepting of unconventional music, than are persons with a closed worldview.

**Non-linguistic avenues of communication.** Many thinkers that embrace different forms of Existentialism, mysticism, or spiritualism have claimed that the most important beliefs are so inextricably tied to personal experience that they cannot be communicated with words, that is, they are ineffable. Even those experiences that can be formulated in language may lose their subjective meaning upon linguistic articulation. Some philosophers, for example Kant and Schopenhauer (Hamlyn, 1994), have been intrigued by the power of alternative channels of communication such as poetry, music, and art in expressing emotional experiences that resist straightforward linguistic articulation. Body language may also be a way to express things that cannot be said in words. It is however hardly possible to take into account these kinds of channels of communication when we want to investigate many different individuals and compare their worldviews; they are more important if we turn to idiographic research.

**Expression in general psychological processes.** Worldview theorists who focus on the foundational assumptions of the worldview tend to hold that the true nature of a worldview is revealed more in the processes that it structures than in the content of belief reports, because the most deeply entrenched assumptions precede conceptualization. These processes include thinking, perception, and affective reactions as well as other behaviors (Koltko-Rivera, 2004; Rokeach, 1960). The way that we can take this into account is simply by applying the worldview concept as an explanatory framework to research on common psychological processes.

**Classifications of the contents of worldviews**

As some worldview theorists have noted (e.g. Naugle, 2002; Sire, 2004), the way that the content of a worldview is conceptualized is worldview-dependent. After Plato, many philosophers believed that the most fundamental questions were those that concerned ontology. In Descartes, the main philosophical focus shifted to epistemology, and with Wittgenstein it shifted to language. But philosophical centrality and psychological centrality is not necessarily
equivalent. For example, even a person who most vehemently denies the existence of anything
divine or supernatural should be able to recognize that people’s beliefs in the existence of these
entities are important to their psychological reality; perhaps even more so if the beliefs are
illusions. There may very well be some questions that are psychologically important for all
human beings, although there are certainly also individual differences. However, most of the
existing conceptualizations of the contents of worldviews are based on theoretical speculations
without much empirical support, so they tend, to a great extent, to reflect the personalities of the
theorists and the social, cultural, and historical context in which they were created. By taking into
account many different theories we may be able to derive a multifaceted perspective that takes
into account many different aspects of worldviews.

Categorical and dimensional approaches. Apart for this, the influence of the worldview
theorist’s own worldview in conceptualizing the contents of a worldview is most obvious in how
this task is approached. There are two main approaches, which correspond to what Koltko-Rivera
(2004) has called categorical and dimensional worldview models. The categorical models arise
from a belief that different worldviews are incommensurable. Rather than claiming that all
worldviews are dramatically incommensurable, many worldview theorists have claimed that the
worldviews of different persons are commensurable to the extent that they are of the same type.
Dimensional models are intended to specify parts of worldviews, that is, different areas in which
all human beings have beliefs. These beliefs are assumed to be psychologically important for
people in general. I agree with Koltko-Rivera that dimensional worldview models are preferable
in psychology, because a set of dimensions, or even a single dimension, can always be construed
as a category. If the dimensions are considered to be important enough and sufficiently
permeative of the worldview, the entire worldview can be viewed through an aspect that unifies
the dimensions. For example, worldviews are often, in the popular literature, separated into
categories such as materialism versus spiritualism, mechanism versus organicism, or
reductionism versus holism, in reference to a wealth of dimensions concerning ontology,
cosmology, epistemology, and even values and morality.

Conceptualizations in philosophy. Categorical approaches dominated early worldview
philosophy. Hegel described a large number of forms of consciousness, such as sensuous and
intellectual, emotional and reflective, practical and theoretical, mystic and philistine, sceptical
and dogmatic, empirical and speculative, conservative and radical, selfish and social, religious
and secular. Kierkegaard described a development from aesthetic or hedonistic to ethical and further on to religious worldview and claimed that only the final stage can provide an adequate elaborate worldview. Jaspers distinguished three different types of worldviews, in which people seek refuge from the existential reality. The first type of worldview is characterized by scepticism or nihilism. The second type of worldview is oriented toward the finite, and may incorporate rationalisms, absolutisms, authoritarianisms, or other protective shells. The third type of worldview, on the other hand, turns toward the infinite, beyond things such as protective shells. Dilthey’s taxonomy of worldviews is however by far the most elaborate attempt of worldview classification of this philosophical era. First, he distinguished between different religious worldviews, and described their characteristics as fixity upon the transcendent world and unshakable epistemic confidence. But, because he found these worldviews to be too restrictive of the human spirit, he progressed to examining the poetic worldview. He believed that a poetic worldview liberates a person from reality, that it offers channels for emotional expression, and that it can shed light upon the enigmas of life as well as the meaning of things in concrete life. But this type of worldview cannot satisfy the human desire for stability and demand for reason without progression to the metaphysical worldview. In contrast to Kierkegaard, Dilthey claimed that metaphysics is needed to provide an adequate elaborate worldview. Therefore, he proceeded to developing a classification of the metaphysical worldviews. He found three broad categories, which correspond to the dominance of body, the dominance of mind, and the interdependence of body and mind. The first category is naturalism. According to this worldview, human beings, including intellect and consciousness, are completely determined by nature, and therefore everything can be explained by mechanist causality and all knowledge and value is grounded in sensation. The second category, called the idealism of freedom, is the opposite of the first. According to this perspective, the human mind and consciousness is completely free and independent from any form of physical causality. The final category, called objective idealism, seeks to reconcile and integrate the mental and natural realms into a harmonious whole, with the use of intuition and contemplation (see Naugle, 2002).

Conceptualizations in psychology. Although categorical models have been popular in worldview philosophy, the psychology of worldviews is dominated by dimensional models that focus upon a very narrow part of the worldview. For example, Wrightsman (1991; see also Koltko-Rivera, 2004) has theoretically distinguished six dimensions of beliefs concerning human
nature that, upon factor analysis, break down into a main factor of beliefs concerning the general
goodness of human nature and a smaller factor of cynicism. Especially Maslow (1968), but also
Frankl (1969) and Yalom (see Debats, 1996), have emphasized the role of meaning in life in a
worldview. Maslow stressed that an adequate elaborate worldview must incorporate a meaning in
life that corresponds to the individual’s intrinsic values. Stace (as cited in Koltko-Rivera, 2004)
has described the mystic worldview and its beliefs in a spiritual reality that is conscious, living,
and unified, that an individual can become immersed in upon ego-transcendence. Forsyth (1980,
1993; Forsyth & Nye, 1990) has investigated a model of ethical ideologies. As I will argue later,
his main instrument appears to measure some kind of moral contextualism and deontology and
not what he actually intended to measure. Other worldview theorists have focused on beliefs
concerning causality. For example, Sue’s model of internal and external locus of control and
responsibility is well-known in psychology. Coan has been able to find as many as six distinct
dimensions of beliefs concerning causality in factor analyses. He also found the dimensions of
theism versus non-theism, productiveness versus spontaneity, adventurous optimism versus
resignation, and a dimension that corresponds to epistemic tolerance versus dogmatism.
Causality is also the main theme of Pepper’s influential theory of world hypotheses. This theory
is the clearest exception from the trend in psychology to focus on dimensional models, because
Pepper’s world hypotheses are different types of worldviews with different root metaphors. He
originally described six such metaphors, but soon dismissed animism and mysticism, claiming
that they were unable to provide adequate elaborate worldviews. After this, he described the four
remaining hypotheses in detail. Formists live through the metaphor of similarity and try to
categorize phenomena into classes. Mechanists live through the metaphor of a machine which is
reducible to parts that are controlled by the law of cause and effect. Contextualists live through
the metaphor of the in-the-moment event and see the world as a perpetual flux of events that only
make sense in relation to specific contexts. Organicists live through the metaphor of a living
organism and try to understand reality as a complex, integrated, organic, and unfolding whole
(for a more thorough review of these models, see Koltko-Rivera, 2004).

Freud also emphasized beliefs concerning causality and other metaphysical questions. He
mentioned beliefs concerning: (1) the origin of the universe, (2) the sources of well-being, (3) the
efficacy of magical versus direct action, (4) the existence of unconscious determinants of thought
and behavior, (5) the issue of free will, and (6) spiritualism versus materialism. But, for Freud,
the distinguishing characteristics of worldviews were beliefs concerning epistemology. With
epistemology as a dimensional criterion, he distinguished between the worldviews of science,
philosophy, art, and religion. Royce also emphasized epistemology and distinguished between
four epistemic approaches: (1) authorities decide what is true, (2) the laws of logic decide what is
true, (3) sense experience decides what is true, and (4) the intuitive perception of gestalts decides
what is true (Koltko-Rivera, 2004; Naugle, 2002)

Of the more encompassing and influential worldview theories, Kluckholm’s theory of value
orientations must be mentioned. According to him, a worldview is defined by answers to
questions in six basic areas of human thought, namely whether a person: (1) believes that human
nature is good, bad, neither, or both, (2) believes that human nature is mutable, (3) believes that
human beings should try to live in harmony with nature, rather than controlling it, (4) focuses on
the past, present, or the future, (5) prefers spontaneous in-the-moment activities or activities that
focus on measurable external achievement, (6) prefers hierarchical or collateral forms of
relationships or individuality. The activity orientation is analogous to that in Coan’s model.
However, Koltko-Rivera (2004) has claimed that the relational orientation confuses relation to
group (individualism or collectivism) and relation to authority (hierarchical organization) and that
the activity orientation confuses whether the activity is directed outwards or inwards with
whether satisfaction should be sought in movement or stasis.

Psychologists have also, in recent years, become interested in beliefs about the general nature
of the social world, especially its benevolence and justness. Drawing on the cognitive balance
theories, Lerner hypothesized that human beings have a need to believe that the world in which
they live is a just place where people generally get what they deserve. This dimension was later
conceptualized as varying between just, unjust, and random, with distinctions between the
personal, interpersonal, and political domains (see Koltko-Rivera, 2004). Janoff-Bulman (1992)
has also claimed that all human beings normally assume unconsciously that the world is
benevolent and meaningful and that the self is worthy. But upon confrontation with trauma, this
frail illusion of stability and security is shattered and must be rebuilt through a through
worldview revolution. Moreover, beliefs concerning the danger and competitiveness of the social
world, and their relationship to authoritarianism and social dominance orientation have been
explored in research on prejudice (Duckitt, Wagner, Du plessis, and Birum, 2002).
More recently, Koltko-Rivera and Edwards (2000) presented a framework to assess worldview beliefs that are relevant to counseling and psychotherapy. This rendered an instrument with six dimensions: (1) mutability of human nature, (2) free will, (3) locus of responsibility, (4) relation to authority, (5) relation to group (individualism or collectivism), and (6) materialism versus spiritualism. Koltko-Rivera (2004) later made a thorough review of many of the worldview theories that I have mentioned here, in an ambitious attempt to integrate all of the dimensions of different worldview theories, at least tentatively, into one collated worldview model. This, he claimed, may eventually lead to a cohesive and parsimonious theory of the dimensionality of worldviews as factor values sort out the dimensions. His tentative model is divided into seven main dimensions: (1) human nature, (2) free will, (3) cognition, (4) behavior, (5) interpersonal, (6) truth, and (7) world and life. These dimensions are subdivided into a total of 36 dimensions, which are further subdivided into a total of 96 dimensions. A detailed critique of this model is beyond the scope of this discussion. But one striking feature that deserves mention is that the model does not directly, despite its gigantic scope, include any prescriptive beliefs, although these may be expressed indirectly in other dimensions in the model. Koltko-Rivera’s project does however most certainly have a potential to yield valuable insights, although it also has limitations. The problem lies in the arbitrariness of the division of the total belief system of an individual into one worldview part and one non-worldview part, where the components of the former part are all assumed to be on some equal level of importance. A factor analysis does not directly take into account depth, entrenchment, and so on, as well as the interrelations of different dimensions, which makes it hard to sort the chaos of worldview dimensions out by factor analysis alone. Creativity, perceptiveness, and conceptual analysis are also crucial for hypothesizing relationships between different dimensions and devising models to test the ideas.

*Conceptualizations in anthropology.* Apart from this, the most thorough attempt to find themes that are universally present in human worldviews has been made by the anthropologist Redfield. His conceptualization is centred around metaphysical questions, especially on the ontology of *self* and *other*. He claimed that self is separated into *I* and *me* and that other is separated into *human* and *nonhuman*. The human other is further separated with regards to properties such as sex, age, in-group and out-group, and so on, and the nonhuman other is separated into *God* and *nature*. He also observed an omnipresence of beliefs concerning time, space, birth, and death. Although these categories are present in all cultures according to
Redfield, they are filled with different contents in different contexts. Moreover, he used this dimensional model to study the cultural transition from a primitive to a civilized type of worldview, the latter of which he viewed as negative and disruptive. In primitive cultures, humanity, god, and nature existed as one unitary and sacred system or interdependence, shared support, and moral order. But, with the rise of civilization, humanity separated itself from this unified order and began to view it as a system of objective physical properties that human beings can stand over and master. According to Redfield, this led to a fragmented, amoral, uncaring, and even hostile order that had lost its sacral character (see Naugle, 2002).

The self-concept. As suggested by Redfield’s analysis, self-concept, or selfview, is also an important part of a worldview. There is indeed voluminous literature on self-concept within psychology and the self-concept is often considered to be central in the organization an individual’s systems of belief. For example, Rokeach (1960, 1968) claimed that primitive beliefs about the self form the innermost core of the worldview. Thus, it will be a natural step to integrate selfview into worldview in future theory and research, because the total view of the world includes a view of the self. Many of the results from research about the functioning of selfviews should be possible to generalize to the functioning of worldviews. But, a thorough review of this literature exceeds the scope of the current discussion; I have focused more on the much neglected other-part of the worldview than on the self-part.

Polarities within and between worldviews. Finally, it is important to note that many worldview theorists believe that the polarities of worldview dimensions, or the dichotomies between different types of worldviews, are powerful tools in describing worldviews. For example, Kelly (1955) defined the personal constructs of his theory as being dichotomous, and Jung (as cited in Naugle, 2002) even believed that the problems of opposites that are central in worldviews correspond to the dialectical structure of the soul. This idea is also a prominent theme in Eastern philosophy, for example in the concept of yin and yang.

Although human thinking abounds with dichotomies, a limited number of them have been especially central in discussions of worldviews. One central issue in both Western (see Naugle, 2002) and Eastern philosophy (see Eliade, 1969) is whether there is some ultimate fundament of existence, such as an external material world or a God, and whether there is a foundation for knowledge about such an ontological fundament. This issue takes the form of idealism versus realism in ontology and foundationalism versus relativist and skepticist alternatives in
epistemology. When an ontological foundation has been conceded, the question has usually
turned to whether the foundation is made of material or spiritual substance. Materialism versus
spiritualism has been an especially central issue in the encounter between science and religion
(Fontana, 2003). When a foundation for knowledge also has been conceded, the question has
turned to whether reason or experience provides the deepest insights into reality, that is,
rationalism versus empiricism (Hamlyn, 1994). It is arguable that the polarized focus on reason
or experience is more basic than materialism versus spiritualism, because it can also explain
much of the polarity between free will and denial of free will. It is plausible that all intrinsic
religion is ultimately rooted in some kind of religious experience (see Fontana, 2003) and the
belief in free will is the result of a commonplace human intuition (see Kane, 2002), whereas
beliefs in materialism and theories such as determinism that deny free will are more related to the
more abstract and rationalistic perspective.

Another important dichotomy, which is hinted in Pepper’s, Coan’s, and Kluckholm’s theories,
is between a fixed or fluid view of reality. This distinction was first noted by the philosopher
Whitehead (1938). He proposed that a static metaphysical system naturally leads a person to a
desire to measure enduring properties and create taxonomies based on them. A dynamic world
view, on the other hand, leads to a desire to analyze, understand, and influence the processes
underlying these dynamic systems. He proposed that this distinction applies to scientists seeking
to know the world that they study, as well as to laypeople seeking to know the world they live in
(Levy, Plaks, & Dweck, 1999). Dweck and others (see Levy, Plaks, & Dweck, 1999; Brody &
Erlichman, 1998) have shown that the static worldview is manifested in assumptions regarding
the fixedness of human nature and the moral rightness of adhering to principles and duties. It also
leads to a preference for the status quo and an urge to defend it, which is expressed in political
conservatism. Seeing reality as fluid, on the other hand, is related to seeing human nature and the
world as possible to change for the better. This is manifested in morality and in political
liberalism as an urge to preserve people’s rights.

Meece (2001) has studied the history of philosophy and devised a two-dimensional model of
the worldviews of famous philosophers, with the dimensions of fixed versus fluid and
materialism versus spiritualism. He claimed that this model could adequately capture the way
philosophers make sense of things. The first of his dimensions corresponds to the fixed versus
fluid distinction. On one side of the polarity are philosophers who claim that there are qualities,
or essential categories, within the world, that are everywhere present and unchanging. These philosophers try to understand the world intellectually by arranging these categories into proper order. Through this they want to find the truth and increase their control over things. On the other side of the polarity are philosophers who believe that reality is too fluid and changeable to be grasped by concepts and stereotypes. They try to understand reality in a more experiential manner, focusing on what they perceive, and they claim that truths are relative to experience. The second polarity in his model has to do with spiritualism and materialism in a broad sense. On one side of the polarity are philosophers who believe that reality is spiritual, that there is a higher purpose and meaning in life, and that human beings are free and conscious subjects rather than objects. Philosophers on the other side of the polarity think that everything that exists is purely material and deterministic, and that there are rational explanations for everything. According to them, a spiritualist view is nothing but wishful thinking, and with its false promises it distracts human beings from the urgent needs of a suffering humanity.

These polarities do however apply mainly to the philosophical side of worldviews. Worldviews also have a more emotional dimension. In theological worldview research (see Westerlund, 2001), the concept of a basic emotional posture toward life, which persists in spite of environmental contingencies, has become central. The most striking result of this research is that the emotional postures of optimism and pessimism are very general and show little direct relationship to the more abstract philosophical aspects of the worldview. There seems to be a range of different forms of optimism. Many optimists are materialists and have a strong confidence in the explanatory power of science, many others believe in a personal God or fate as an explanatory force, and yet others seem to hold some kind of existentialist view without a belief in an overarching system of meaning. As an aggregate group, the optimists tend to reject materialism, although they also reject superstition and do not profess any specific views about transcendent or divine powers. They believe in the epistemic power of science, although they see its domain of explanation as limited. They see life as filled with meaning and purpose, primarily through love and communion. They also have a basically positive view of human nature and see human beings as free to create their own lives through their choices and actions. The clearest difference between optimists and pessimists consists in their concrete, rather than abstract, beliefs about control, agency, and purpose in life. Pessimists see the individual as powerless in the hands of outer forces and as without a place in some coherent system of
meaning. They explain history as the result of struggles for survival, rather than autonomous choices, whereas optimists reject this historical pessimism.

Westerlund (2001) does however conclude that the abstract philosophical beliefs are intertwined with the emotional postures, although there are many different variants of intertwinements for each posture. This is exactly what Tomkins (1963, 1965) also claimed in his polarity theory. He formulated his theory to explain a polarity between humanism and normativism that he believed pervades all of human thought, as I will return to in the section on Tomkins’ theory. The claim for generality of Tomkins’ theory goes far beyond all of the earlier mentioned polarities, as it includes everything from realism versus idealism and rationalism versus empiricism to left versus right and man versus woman. But before discussing this theory, I need to develop a bit more of the conceptual apparatus.

A worldview classification in terms of philosophical beliefs and values

When I designed the empirical study that was based on this theoretical five-fold classification of worldview components, I just wanted to include some components that are very likely to be psychologically significant for more or less all human beings, rather than making a full taxonomy of human belief. To be able to sample these beliefs in a systematic fashion while retaining conceptual clarity, I used some of the major subdisciplines and questions of philosophy as a guideline to delineate some philosophical beliefs that seem psychologically, as well as philosophically, basic.

Metaphysical beliefs

As human beings we find ourselves in an existential predicament, trying to make sense of own our lives and the universe we live in. Metaphysics is the discipline in which philosophers deal with these fundamental questions regarding the origins, the nature, the meaning, and the unity of everything there is. Metaphysicians ask themselves what things exist, if there is some ultimate nature or underlying essence of these things to discover, why anything exists at all, and what implications this has for the lives of human beings. These questions are contemplated not only by philosophers, but also by poets, authors, scientists, artists, and the common man. Although religions also deal with these questions, metaphysics can be contrasted to religions by a willingness to follow the evidence and the arguments wherever they may lead, never accepting a
belief based solely on faith, authority, or failure to imagine alternatives. Furthermore, metaphysics differs from scientific inquiry in incorporating value judgements and in investigating and comparing the knowledge and implicit assumptions of different scientific disciplines from a metaperspective (Post, 1991).

One thing to notice about the matters of metaphysics is that it is difficult, or even impossible, to sustain the idea of certain knowledge about them. A consistent metaphysical theory cannot be refuted, and it is often no problem to find two beliefs that are both rationally grounded yet contradict each other. Open-minded metaphysicians do admit that they can imagine that a theory contradictory to their own may actually be correct. Because of this, metaphysics is sometimes said to really be about the philosophers’ psychological temperaments. Critics, for example the logical positivists, have indeed rejected metaphysics, and they have even ridiculed it by claiming that it is completely impossible to gain knowledge in this area (Jubien, 1997; Hamlyn, 1994). Metaphysicians, on the other hand, contend that objective knowledge is possible in metaphysics in the same sense as it is possible in for example physics, because conceptual analysis can be used to evaluate and test philosophical theories, and that although philosophers may fail to find conclusive answers to the questions of metaphysics, they will still gain a valuable understanding of the interrelations of the concepts that are involved.

There is a wealth of questions that have relevance to metaphysics, but this survey will focus on three questions that I assume have special psychological relevance: (a) Is everything that exists composed only by material substance or is there any kind of non-material dimension? (b) Do human beings have free will? (c) Is there a meaning of life?

Materialism versus spiritualism. Metaphysics can be subdivided into (a) ontology, that is, the theory of what entities exist and what properties these entities have, and (b) cosmology, that is, the theory describing the origin and structure of the universe. According to monistic ontological theories, everything that exists is made out of the same substance. Idealists claim that there is no extramental reality, because ideas in the minds of human beings are the only things that exist. However, the most popular monistic theory today in Western society is that everything that exists is purely material or physical. This theory is called materialism and it is not to be confused with the idea that material possessions are valuable. An ontological materialist thinks that every event can, at least in principle, be explained in terms of physical entities and the laws that govern their behavior. This often leads to reductionism. Instead of postulating the existence of for example
souls, a materialist can try to explain mental phenomena like will, imagination, feeling, and thought in terms of biological, biochemical, and neurological concepts like nerve cells, synapses, electrochemical reactions, and molecules. The next step is to claim that these phenomena are further reducible to a fundamental level like that of elementary particles. Materialists believe that science can bridge the so called explanatory gap between the mental phenomena that human beings experience and the physical brain. *Spiritualism*, on the other hand, which is traditionally contrasted with materialism, is a *dualistic* theory in asserting that there is some kind of spiritual substance in addition to material entities. A spiritualist may claim that there are some irreducible entities called souls that are responsible for mental phenomena. The task for the spiritualist is to try to explain the interaction of these entities with the human brain (Dupré, 1993; Post, 1991).

Theories and research on spirituality. Spiritualism or *spirituality* has traditionally been confined to the domains of religion and paranormal psychology, because psychologists have tended to dismiss spiritualistic experiences beliefs as irrational and outside the scope of science (Fontana, 2003). But, in recent years there has been a surge of interest in spiritualism and its relations to mental health, coping, and the search for a meaning in life, especially within helping professions such as therapy, nursing, and social work (Niederman, 1999). In contemporary Western society, many persons who reject dogmatic religiosity still endorse a more tolerant spiritual stance. Forman (2004) has in fact shown that there is a widespread spirituality movement that transgresses the boundaries between traditional religions. Members of this movement generally agree that there is an ultimate reality, for example a god or a spiritual force, that transcends the material dimension and still it is in some sense immanent in all material entities as their deepest nature. They also believe that this deeper nature can be accessed through an experiential process of self transformation. Furthermore, for these persons, spirituality becomes the holistic organization for all of life, that is, it forms the core of their worldview.

Niederman (1999) reviewed research on spiritualism in the social sciences and concluded that there is a lack of consistent conceptual and operational definitions. In response to this, he investigated the beliefs of spiritualists to create a model of spiritualism. This resulted in a conceptualization of spiritualism as (a) a belief in an ultimate non-material reality, characteristic of a god-archetype, (b) a belief that part of the self is spiritual rather than material, and (c) a belief that this non-material part of the self can affect the ultimate reality without a material
causal connection. This is well in line with Fontana’s (2003) delineation of the semantic meaning of the term spiritualism and Forman’s (2004) description the the spirituality movement.

*Free will.* Few questions are more confusing and fraught with uncertainty than the question of whether human beings have free will, and if so, in what sense it is really free. Scholars from as diverse areas as philosophy, neurology, psychology, theoretical physics, mathematics, and theology all want their say in this question and it is still today perhaps the most intensely debated topic in philosophy. It is related to a host of issues such as moral responsibility, autonomy, coercion, self-control, compulsion, akrasia, rationality, predestination, self-deception, and evil, and to metaphysical concepts such as necessity, possibility, time, chance, causation and laws of nature. The problem with free will is rooted in a clash between two different perspectives on the place of human beings in the universe. The first perspective is that human beings have strong intuitions that they do possess a freedom to choose between alternatives and to initiate actions and that they are responsible for their actions, as implicated by views of morality and retribution that are accepted in society. The second perspective moves the focus to a more impersonal and abstract level to possible external determinants of human action such as physical forces, bodily processes, genes, environmental factors, conditioning, and motives that are outside of awareness. If you look far enough from the outside it seems hard to escape the conclusion that agents are helpless and not responsible for their actions (Kane, 2002). For example, *determinists* make use of the more abstract level in denying the existence of free will. Determinism portrays the universe as a mechanism in the sense that every event and state of affairs follows as a necessary consequence of a prior event or state of affairs and the laws of nature. Thus, all actions are necessitated by a prior event or state of affairs and in that sense they are unfree. Other philosophers claim that determinism and free will are not at all incompatible. According to Dennet (as cited in Kane, 2002), the deterministic nature of the universe is precisely what enables the possibility of free will, because only if things do not happen at random can a human agent truly be able to choose. However, to this date, no theory put forth in this debate has resulted in a really plausible reconciliation of the two different perspectives (see discussions in Jubien, 1997; Kane, 2002). Some philosophers simply concede that there is something deeply mysterious and confusing about free will and maybe even something about the biological constitution of the human brain that makes it impossible for human beings to dispel the mystery of free will (see Van Inwagen, 1983).
The parallel of this perspective in psychology is constituted by those researchers who argue that most cognitive, emotional, and motivational processes occur automatically without conscious control (see Kunda, 1999). In a classical study, Libet (1985, as cited in Brody & Erlichman, 1998) showed that the consciousness of initiating a voluntary movement is invariably preceded by a change in electrical activity in the brain. He concluded that conscious intention does not play any causal role in the initiation of an act. In a recent book, Wegner (2002) developed the idea that free will is an illusion. According to him, free will is a mere feeling that tags a person’s actions as his or her own and not someone else’s, and thus it helps the person to develop a sense of self and of morality and responsibility. Moreover, Wegner claims that the belief in free will arises because human beings cannot observe and understand the complex neural mechanisms that underlie their own behavior. Note however that this kind of reasoning presupposes, rather than establishes, that free will is an illusion, then giving an attempt to explain this presupposition.

Theories and research on beliefs related to free will, agency, and control. Psychologists have shown little interest in investigating the abstract beliefs that people hold about free will. But they have shown immense interest in feelings of control, efficacy, helplessness, and competence, which are related to the extent to which individuals believe that they can cause events to occur. The central concept locus of control is defined as the extent to which an individual believes that the outcomes he or she experiences are caused by his or her own characteristics and actions. This belief is developed as an abstraction from specific experiences in which a person experiences causal efficacy or inefficacy. Further research has revealed that the concept is not strictly unidimensional. Persons with an internal locus of control believe that the outcomes they experience depend on themselves and the effort that they put into something. Persons with an external locus of control believe that the outcomes they experience are determined by external forces such as luck, social context, and other persons. An internal locus of control is related to an active pursuit of valued goals and a sense of well-being, and an external locus of control is related to depression, anxiety, and an inability to cope with stressful experiences (Lefcourt, 1991).

Another line of work, inspired by the research on locus of control, is on the concept of powerlessness, which is embedded within the concept of alienation. Powerlessness measures are, in comparison to locus of control, more related to the concrete social world, specifically political and economical outcomes, and they are more domain-dependent. One distinction that has
emerged from this research is between a feeling of personal competence or efficacy and a feeling of sociopolitical control (Seeman, 1991). Research on the belief in free will in a more abstract sense is scarce, but there are some examples. Unger, Draper and Pendergrass (as cited in Jackson & Jeffers, 1989) constructed a questionnaire to assess the extent to which a person views human beings in general as constructing reality rather than being constructed by it. They claimed that the concept measured a factor that they called *social constructionism*, that was related to an internal locus of control and low powerlessness, and it did have interpersonal consequences. Jackson and Jeffers (1989) later contended that this questionnaire measured at least two different dimensions: (a) a view of society and its rules as inherently legitimate and deterministic, called *societal determinism*, and (b) the view that personal striving and achievement determines individual and societal outcomes, called *individual determinism*. Stroessner and Green (1990) also found indications that the structure of beliefs pertaining to free will is multidimensional. They found three dimensions: (a) psychosocial free will in a concrete sense, (b) free will in an abstract philosophical sense, and (c) the doctrine of libertarianism which prescribes freedom of speech and thought. These dimensions were related to locus of control and attitudes toward punishment, and the participants rated the self and other differently on these dimensions. A belief in free will in an abstract sense sometimes also occurs as a part of other concepts, for example in the assessment of purpose of life (see Moomal, 1999).

*Meaning of life.* Although interest in this question has declined among philosophers it has recently increased among social scientists (Debats, 1996). A sense of meaning in life may provide coherence to a person’s worldview and contribute well-being (Moomal, 1999). Kinnier, Kernes, Tribbensee and van Puymbroeck (2003) investigated quotations from prominent persons and found a variety of different themes regarding the meaning of life, for example: to enjoy experiences, to transcend the self, to worship god, to contribute to something greater, to become self-actualized, life is mysterious or absurd, life is meaningless, and life is a struggle. Despite the variety of views on this topic, some more general characteristics can however be discerned.

A belief in the meaningfulness of life is a common component of a spiritualistic view, because the existence of a spiritual dimension guarantees the existence of transcendental meaning. Many religions assert that life has a meaning in itself and that human beings can connect with this meaning through faith and divine relation, though they cannot fully comprehend its complexity (Kinnier et al., 2003). But, some metaphysical theories do pose a threat to the intuitively
desirable belief that life is meaningful. Reductive materialists claim that the world is value-neutral, inert, or dead. What human beings call value and meaning is then merely something that they project upon the world, such as their moods and passions. Some philosophers argue that values cannot be reduced to, or derived from, the material entities that do have an objective existence, because this would entail a very mysterious relation, and therefore objective values do not exist. Others (e.g. Post, 1991) claim that a non-reductive version of materialism can incorporate values that are true in an objective sense, although these values may be so complex or emotional that it is impossible to ascertain what they are. That something is material does not imply that it is nothing but material, that is, it can still have an objective meaning. According to this view, there are better or worse ways of projecting meaning onto the world, in the sense that some are correct and some are not. Other philosophers, such as Schopenhauer and Russell, have rejected altogether any attempts of perceiving the lives of human beings as meaningful, by insisting that human beings are insignificant and face inevitable extinction. Yet others, especially philosophers from the existentialistic tradition such as Nietzsche, Camus, and Sartre, have argued that human beings have to face the fact that life is meaningless in itself and that they are responsible for creating their own personal meanings (Kinnier et al., 2003).

Psychiatric theories of meaning in life. Maslow and Yalom are two very influential psychiatric theorists who see meaning in life, that is, a person’s sense of meaning in his or her own life, as a personal construction. In Maslow’s (1968) theory, meaning is an emergent property within the person. In his famous need hierarchy, meaning in life is a meta-need of a higher order than all other needs; it differs from the low-order deficit needs in stimulating growth rather than merely contributing to the aversion of illness. For individuals that are high in the need hierarchy, the need for a system of values to fulfil is essential. Without a framework of values human beings become ill. Maslow stressed the importance of choosing meanings that correspond to your own values, so that they can help you to fulfil your inner nature. Yalom, on the other hand, (as cited in Debats, 1996) started from an existentialistic point of view with the individual’s confrontation with four ultimate concerns, namely death, freedom, isolation, and meaninglessness. According to Yalom, an individual can respond creatively to the absolute meaninglessness of the world by choosing his own circumstances and constructing his own meaning in life. Yalom stressed that human beings have to commit themselves wholeheartedly to their personal meanings in order to be able to avoid the anxiety caused by meaninglessness and an awareness of the inevitability of
death. In order to avoid nihilism and despair, human beings thus need some kind of ideals and guidelines to impose stability and security on life. A potential weakness of this view, however, is that perceiving the world as meaningless in itself may result in an overwhelming sense of responsibility and despair.

Frankl’s (1969, see also Debats, 1996) theory differs from the two previous theories in claiming that meanings are discovered rather than arbitrarily created. According to Frankl, the world is intrinsically meaningful, and you can, through a persistent search guided by conscience and intuition, discover the true meaning of a given situation. Frankl mentioned three types of value that constitute the sources of meaning: (1) creative values inspire a person to produce, create, and achieve, usually through some form of work, (2) experiential values include positive human experiences such as love and appreciation of beauty, and (3) attitudinal values let people choose their attitudinal stance in the face of unavoidable adverse conditions, for example facing injustice with dignity. Frankl saw the quest for meaning as a primary motive for human beings, which is necessary for a person to pursue in order for him to experience life satisfaction and self fulfilment. If meaning is not pursued, a sense of meaninglessness will arise and in the long run it may develop into a form of existentialistic neurosis.

In a more concrete perspective, it may be appropriate to describe human beings as discovering meaning when they are young and then more as creating personal meanings when they start to break out of systems of meaning that have been assimilated from culture. At any rate however, regardless of the ontological status of the meaning of life, research has consistently shown that the experience of meaning in life is associated with high positive and low negative mental health (Debats, 1996).

The psychological benefits of experiencing meaning in life. Battista and Almond (as cited in Debats, 1996) discovered that psychiatric theories tend to converge in their view of what it means to say that your own life is meaningful. According to them, it means that you: (a) are committed to some concept of the meaning of life, (b) have a framework or have derived a set of life goals, or purpose in life, from this concept, (c) see yourself as having fulfilled, or being in the process of fulfilling, your life goals, and (d) experience this fulfilment as a feeling of significance. Battista and Almond took a relativistic approach, by claiming that commitment to any system of beliefs can serve as a framework for developing meaning in life, and that focus should be on the process of believing rather than on beliefs per se. However, some research has indicated that some
meanings may be better than others in the sense that they lead to more positive health outcomes. For example, Halama (2000) conducted a study to investigate how different aspects of the meaning of life construct are related to coping with frustration in life. He distinguished between (a) how intensely an individual experiences life as meaningful, (b) what breadth there is to the sources from which meaning is derived, and (c) what depth there is to the values that constitute the sources of meaning. Depth refers to the extent to which the individual’s values are self-transcendent as opposed to self-preoccupied. Halama found that, on the whole, there were weak relationships between meaninglessness in life and aggressive reactions and between meaningfulness in life and constructive reactions. Scrutinizing the different dimensions, he found that breadth of meaning was the weakest predictor of coping and that depth of meaning was the strongest predictor of coping. Therefore, he suggested that self-transcendent values serve as a source of coping with stress reactions, whereas values stressing self-preoccupation may lower the ability of constructive coping with stress and thereafter lead to compensation with aggressive strategies. In another study, Debats (1996) found a positive relationship between meaning in life and the experience of being in contact with the self, with others, and with life or the world, which is analogous to Niederman’s (1999) conceptualization of spiritualism. The experience of meaninglessness or alienation is characterized by a feeling of disconnection to these three things.

Sometimes a distinction is made between two aspects of meaning in life in theory and measurements. The cognitive component consists of meaningful beliefs and life goals, and the affective component consists of the subjective experience that life is meaningful (e.g. Debats, 1996; Moomal, 1999). But, although different questionnaires assess a diversity of aspects of meaning in life, such as life satisfaction, sense of freedom, fear of death, views related to effective coping, or meaning in life as a framework or set of life goals, they all tend to show high intercorrelations. This indicates that meaning in life is expressed in a host of different psychologically significant ways. Research has shown that meaning in life is related positively to sociability, social participation, ego resiliency, internal locus of control, acceptance of death, adequate defense mechanisms, satisfaction with self, satisfaction with life, general health and mental well-being, and negatively to neuroticism, dogmatism, anxiety, depression, and general psychopathology. It is also related to biographical variables (Moomal, 1999).
Epistemological beliefs

Epistemology is the branch of philosophy that deals with questions about the nature, acquisition, and certainty of knowledge. These questions have been debated for thousands of years. It is important to delineate epistemology from ontology, because failure to do this is a pervasive source of conceptual confusion among scientists. For example, to say that it is impossible to acquire certain knowledge, or even knowledge at all, about something is not equivalent to saying that it does not exist.

Contemporary philosophers disagree over what separates knowledge from beliefs, but they generally agree that one necessary condition for a belief to constitute knowledge is that it is true. There is however a sharp divergence between different philosophers opinions on how the truth concept should be analyzed (Hartman, 1998; Jubien, 1997).

Realism and relativism. Proponents of realism about the truth claim that truth is a relational property that so called propositions, which they believe are the meanings expressed by sentences, instantiate if they stand in an appropriate relation to a mind-independent world. Consequently, truth is objective and absolute in the sense that the same things are true for everyone. Truth anti-realists on the other hand claim that truth depends on epistemic concepts such as belief and justification. For example, they may claim that a belief is true if it coheres with other beliefs. Many anti-realistic doctrines incorporate relativism about the truth, which means that everything is true in relation to some perspectives and false in relation to others. Relativism says that truth is a relation, whereas absolutism says that truth is a property (see Jubien, 1997).

Rationalism and empiricism. Another important distinction pertains to the acquisition and justification of knowledge rather than its nature. Rationalism and empiricism are two theories that share the claim that every belief has to be justified in relation to another belief. This claim would initiate an infinite regress unless a foundation of knowledge is postulated. The rationalists identify this foundation with reason and the empiricists identify it with experience. These two terms have subsequently come to be more loosely used in scientific discourse to focus on reason or experience as a source of knowledge or to assert that either of them is the primary source of the knowledge of human beings (Chalmers, 1997; Hartman, 1998). Furthermore, a crucial point established in the philosophy of science is that knowledge acquisition is not as straightforward as the logical positivists originally thought, because observations are always impregnated with
beliefs and theories. Therefore, a strict empiricism is no longer tenable and it is hard to maintain that knowledge can be completely certain (see discussion in Chalmers, 1997).

**Constructivism.** Another important concept to introduce is *constructivism.* The idea of constructivism can be traced back to Kant’s epistemology (Hamlyn, 1994). Kant asserted that sensory information must be transformed by the mind in order to constitute knowledge, construing knowledge as an active construction rather than a mere mental copy of reality. Although Kant did postulate a mind-independent reality that transcends the human mind, he believed that this reality can only be known through the human mind, as a human construction, and not as it is in itself. The general idea of constructivism signifies merely that there is a constructed inner world and not whether there is also an external mind-independent reality or not. For example, the popular variant called social constructivism does in itself not add anything more than a focus on societal and cultural factors that affect the construction of the inner world. Numerous different theories, with different assumptions concerning the existence of an external mind-independent world, fall under the label of constructivism. Such different variants of constructivism are frequently confused and conflated in social science. In my subsequent discussions, I will, for purposes of psychological description, use the term constructivism in a somewhat loose and general sense, simply to signify an emphasis on the claim that acquiring knowledge is an active process of creation that involves the construction of an inner world, rather than passive assimilation of sense data and mental copies of external reality.

**Common conceptual confusions.** To be able to appropriately elucidate the existing empirical results from research epistemological beliefs, we need to dispel a deceptive and fallacious line of reasoning that often engenders confusion. That different persons often construe the same things differently is a well-established tenet of psychology. Different contextual factors, such as personal worldview and physical perspective, engender different personal construals. This constructivism, or *relativism about perspectives,* is today almost a truism in psychology, and it often leads to an emphasis on openness and tolerance of alternative viewpoints that represent different construals. But, a relativism about perspectives is often fallaciously equated, or otherwise conflated, with other kinds of relativism that are more controversial, namely relativism about the truth and moral relativism. Although relativism about perspectives is consistent with the latter forms of relativism, it does not imply them. It is certainly possible to endorse relativism about perspectives, acknowledging that human beings have different perspectives, while denying
the other forms of relativism. This fallacy of equivocation has even led some theorists to the erroneous conclusion that endorsing absolutism about the truth involves viewing knowledge as external to the person. Moreover, the term relativism is often confused, not only with constructivism, but also with scepticism about the possibility of certain knowledge. This is the result of a failure to uphold the distinction between the question of the nature of knowledge and the question of the certainty of knowledge (see discussion in Jubien, 1997; for examples, see Brownlee, Boulton-Lewis, & Purdie, 2002; Schommer and Walker, 1995; Schommer, Calvert, Gariglietti, & Bajaj, 1997).

Theory and research on epistemological beliefs in education. Only in the last decades have educational researchers and psychologists begun to appreciate the influence that epistemological beliefs have on thinking, learning, reasoning, and problem solving. The research focus has been on how students develop their epistemological beliefs from naïve to more sophisticated. In an influential study, Perry (as cited in Brownlee, Boulton-Lewis, & Purdie, 2002) followed Harvard University undergraduates though college to investigate how their epistemological beliefs changed. The students started out believing in absolute and certain truths that are transmitted from an authority or expert to other individuals. Gradually, the insight that some things cannot be known with certainty developed into the belief that knowledge is actively constructed and relative to the individual’s personal interpretations and experiences. This developed into a commitment to certain beliefs, along with an awareness of the difficulty of knowing things with certainty.

Following Perry, several classifications of epistemological belief were developed, all depicting personal epistemology as unidimensional. In an effort to resolve conflicting research results, Schommer and Walker (1995) contended that a person’s epistemological beliefs form a system of independent beliefs that do not necessarily develop in synchrony. Schommer created a questionnaire to test this thesis, and she found four different types of belief among children: (a) knowledge is composed by isolated facts, (b) knowledge is certain, (c) the ability to learn is innate, and (d) learning occurs quickly or not at all. Variation on a dimension is assessed as the percentage of the knowledge or learning of human beings that a person believes is characterised by that particular dimension. Schommer and her colleagues later found support for the hypothesis that these types of belief develop, at least in part, independently of each other (Schommer et al., 1997). Others have contended that not all of Schommer’s dimensions contain epistemological beliefs, but that some of them really assess learning styles. Brownlee et al. (2002) elaborated
Schommer’s conceptualization by adding beliefs that concern (a) authority as the source of knowledge, defining this dimension along with (b) knowledge as isolated facts, and (c) knowledge as certain, as core epistemological dimensions. According to Brownlee et al., the two dimensions (d) innate knowledge and (e) quick learning are peripheral to the belief system, because they are not as central in the network of epistemological beliefs as the core beliefs, and therefore they are less connected to other epistemological beliefs and more malleable than the core beliefs.

The mentioned theorists all view the sophistication of a personal epistemology as the extent to which the epistemological beliefs are relativistic, in the sense that knowledge is regarded tentative, personal, and relative to various contexts (e.g. Brownlee et al., 2002), which is not to be confused with relativism about the truth.

Although the epistemological beliefs addressed in the mentioned research are quite concrete and context specific, Schommer and Walker (1995) have shown that these beliefs nonetheless tend to be domain-independent. It is less clear how culturally universal they are. Tasaki (2001) suggested that the kinds of epistemological belief valued in America may be biased in favor of students with Western cultural backgrounds. Distributing Schommer’s questionnaire to a multiethnic sample, he found support for his suggestion. The extent to which the participants in his experiment had an independent self-construal as opposed to an interdependent self-construal was related to the extent to which they saw knowledge as certain and handed down by authority.

Beliefs concerning human nature

In a strict sense, the category of beliefs concerning human beings in general and the human nature should be subsumed under ontology, because human beings are parts of reality just like all other entities that may exist. But this specific aspect of reality appears to be so central to the worldviews of human beings that I will treat it as a psychologically separate category. Their importance springs from the function that these beliefs have in serving as guides to the interaction with other persons and to life in general. We need to be able to explain and predict human behavior, and to do this, we need to create simplified models of the mental origins of the behavior of other persons, construing them as if they act in consistent ways. Some thinkers have in fact claimed that our perception that there is a human nature is only an instrumental
simplification and that there really is no such human nature. For example, Sartre (as cited in Kauffman, 1975) argued that human beings are completely free to create their own character, because “existence precedes essence”. Some contemporary philosophers (e.g. Dupré, 1993) have also criticized the more general idea that there are well-ordered ontological categories (e.g. human being) that share a common essence (e.g. human nature). Nevertheless, the dominating idea throughout the history of human thinking seems to be that there is indeed a human nature.

**Western views of human nature.** In Western society, the view of human nature has historically been predominantly pessimistic. A widespread conception of human nature, influenced by thinkers such as Nietzsche (as cited in Barrett, 1958) and Hobbes (as cited in Rachels, 1999), and manifested in philosophy and economics, is that human beings are *rational egoists*. According to this view, all human beings act out of self-interest, and they are friendly to others merely because they realize that this is in their own self-interest. The contention that behind every human action there is a deeper egoistic motive is still today popular, even though it is widely held by philosophers to devoid of content (Rachels, 1999). The Freudian view is another example of a pessimistic view. According to Freud, human beings are basically irrational animals that are driven by the unconscious operation of sexual and aggressive impulses. Therefore human beings must be tamed, or taught to sublimate their impulses in Freud’s terms, by civilization (Pervin, 2001). Others theorists acknowledge the prosocial, cooperative, and altruistic behaviors of human beings by claiming that both egoism and compassion may be primary motives in different contexts. Compassion is considered possible, but only when it satisfies the needs of the individual who expresses it. Others, for example Rosseau (as cited in Shan & Sidney, 1994), see human nature as basically loving and compassionate, although they also admit that selfish behavior can arise under environmental pressure (see Goleman, 2003). A slight variation of this is the view advocated by humanistic psychologists, namely that human beings have an inner potential to grow and actualize themselves that will flourish unless corrupted by society (e.g. Rogers, 1961).

In personality psychology, human beings have been described as rational creatures that choose how to act, as animals that are irrational and driven by biological urges, as machines that automatically respond to environmental stimuli, and as computers that process information (Pervin, 2001). The metaphor of human beings as animals, originated by Darwin’s classical work, has retained its strength to this day, and it has been reinvigorated by the striking findings that human beings are *genetically* similar to animals that they appear *phenotypically* to be very
dissimilar to. Today, a consideration of the evolutionary perspective is an integral part of any scientific account of human nature (Buss, 1999). However, one challenge for the evolutionary account has been to accommodate the findings of altruistic behavior in human beings and animals. For example, even very small children have been found to frequently exhibit spontaneous altruistic behaviors. Darwin’s original formulation of the theory of evolution implied that all individuals act exclusively out of self-interest to reproduce their genes, which leads to a natural selection. Contemporary evolutionary biologists acknowledge that altruistic behavior toward genetic relatives, or between members of the same stable social group, may increase an individual’s chances of reproducing his or her own genes. Also, altruistic behavior may have evolved because selfish individuals in reality become societal outcasts (Shan & Sidney, 1994). In contrast to the biological perspective, many scholars, most notably from the existentialistic tradition, altogether reject the idea that human beings are nothing but animals. They claim that capacities that are unique to human beings, such as consciousness, thought, and language, and especially the fact that human beings can contemplate existential concerns like freedom, responsibility, and death, elevate human beings over other animals (Pervin, 2001).

Eastern views of human nature. As Shan and Sidney (1994) note, these Western conceptions of human nature are very individualistic, largely ignoring the social worlds of human beings. In Western cultures, society is often viewed as either corrupting or civilizing the basic asocial nature of human beings. Eastern conceptions of human nature are much more focused on the social aspect. For example, according to Buddhism, the deepest human nature of individuals is a sense of compassion with all living beings and an impulse to eliminate all suffering. Because buddhists believe that the human nature is the true self of all individuals, they do not distinguish sharply between different individuals. Consequently, they believe that all suffering should be responded to with compassion, regardless of whether it is the suffering of self or other (Goleman, 2003). The difference between Western and Eastern views of human nature is closely tied to the distinction between independent and interdependent self (Markus & Kitayama, 1991, as cited in Brody & Erlichman, 1998). In the East, the self, and thus the other, is thought of in terms of social concepts such as group membership, role, and relationship, rather than individual personality traits.

Beliefs concerning other persons and their systematic errors. Which emotions, motivational tendencies, or traits that constitute universal aspects of human nature is matter of current debate
in psychology (Buss, 1999). Another important thing to investigate is the consistency of human behavior, because many individuals, especially Westerners, tend to think of other persons in terms of stable personality traits. Social psychologists have revealed that traits show low cross-situational consistency, but also that they do show high temporal consistency. This means that people tend to act the same way in a certain situation at different times, but they generally do not act in accord with the same traits in different situations. Westerners may perceive this as counterintuitive, because they often grossly overestimate the influence of underlying traits on behavior (the correspondence bias), and they even infer traits spontaneously from behavior. Easterners, on the other hand, tend to view human attributes more in terms of context-specific behaviors that vary from one social situation to another (Kunda, 1999). The extent to which people believe that human attributes are fixed, called an entity theory, as opposed to malleable, called an incremental theory, affects: (a) how extreme trait judgments they will make of others from limited social information, (b) whether they will adjust the trait judgments when they are exposed to expectancy-inconsistent information, and (c) how much variability, across time and contexts, they will expect in people’s behavior (Levy, Stroessner, & Dweck, 1998). Children may have different views of the fixedness of different traits, but Dweck (as cited in Brody & Erlichman, 1998) has suggested that children also develop general beliefs concerning the goodness or badness of the self and the fixedness or malleability of the self. Other studies have shown that people have little introspective access to the cognitive processes that underlie their own judgments and that they underestimate how differently others persons construct their view of the facts of a situation that underlie a judgment. Most persons simply assume that people see the facts as they are (e.g. Nisbett & Wilson, 1977, as cited in Kunda, 1999; Haidt and Algoe, 2003). Haidt and Algoe (2003) has claimed that the latter misconception, that they call naïve realism, along with the correspondence bias, makes human beings predisposed to separate other persons into the categories of good and evil and amplify this judgment. Haidt and Algoe further theorized that this may be a human reaction to existential concerns like anxiety, isolation, fear of death, and meaninglessness, because it gives human beings a sense of being a part of a larger cosmic struggle in which they have an important role to play.

Attachment theorists have investigated how views of the self and other persons develop from early attachment relations with caretakers. According to Bowlby’s (1973, as cited in Bartholomew & Horowitz, 1991) theory, children form internal representations, or models, of
attachment that come to work as prototypes for later relationships outside the family. The model of the other is formed by judging the extent to which the caretaker is the sort of person who in general responds to calls for support and protection. The model of the self corresponds to whether or not the self is judged to be the sort of person toward whom anyone, and the caretaker in particular, is likely to respond in a helpful way. This research underlines the interdependence of the view of the self and the view of others. Acceptance of the self and acceptance of others should converge according to this theory, which research has consistently shown that it does. Representations of the self and other are conceptualized as two distinct but interrelated dimensions, where the scales correspond to how they are evaluated. This renders four different categories of attachment styles, called secure, dismissive, preoccupied, and fearful, with different ways of relating to other people (Bartholomew and Horowitz, 1991).

Research on beliefs concerning human nature. According to Wrightsman (1991), the explanatory power and breadth of influence of the concept of human nature is underrepresented in psychological measurement, although there are some useful instruments. Christie and Geis (1970, as cited in Wrightsman, 1991) developed a scale to measure the concept of Machiavellianism, which concerns the socially undesirable belief that other people can be manipulated in line with the manipulator’s goals. The scale is divided into (a) the nature of interpersonal tactics, (b) views of human nature, and (c) generalized morality. It has been shown to predict interpersonal behavior. Machiavellian people are less emotionally involved with other people and with sensitive life issues, they care less about saving face in embarrassing situations, and they are better at manipulating and persuading other people and get persuaded less easily themselves. Another finding is that the Machiavellianism of Americans is currently increasing (Wrightsman, 1991).

The Philosophies of Human Nature scale was designed to tap the expectancies that individuals have about the behavior of people in general. Theoretically, the scale is divided into six subscales: (a) trustworthiness, (b) altruism, (c) independence, (d) strength of will and rationality, (e) complexity of human nature, and (f) variability in human nature. But, factor analyses have revealed that people’s beliefs are not this differentiated in reality. For example, if a person is regarded as unreliable and dishonest, this person is often automatically perceived as selfish and uncooperative as well. This scale seems to tap two weakly correlated dimensions: (a) a general belief in the goodness of people, and (b) a smaller factor called cynicism, that consists mostly of
items concerning altruism and trustworthiness. Research has shown that view of human nature, as assessed with this scale, is more positive in women, strongly negatively correlated with dissatisfaction with the self, negatively correlated with Machiavellianism and political cynicism, and predictive of behaviors such as students’ ratings of their instructors.

Fey (as cited in Wrightsman, 1991) created a scale to investigate the relationship between feelings of self-acceptance, acceptance of others, and others’ acceptance of the self. Results with this scale have shown that individuals with high self-acceptance tend to accept others and feel accepted by others, but they are neither more nor less accepted by others than those with low self-acceptance scores. Those individuals who exhibit high acceptance of others tend to feel accepted by others and tend to be accepted by them. Persons who think relatively better of themselves than they do of others tend to feel accepted by others, but in reality they are significantly less accepted by them. On the whole, self-estimated acceptability of the self has proved to be independent of other persons’ actual acceptance of it.

A number of other scales have been constructed to delve deeper into the concept of trust in others, which is related to interpersonal relationships. Some of them concur that dependability, that is, a feeling that you can depend on someone else, is a major dimension of interpersonal trust (Wrightsman, 1991).

Beliefs concerning morality

Moral philosophy deals with how human beings ought to act or live. Because a sound moral system must be based on what it is possible for human beings to do, moral philosophy is closely tied to beliefs concerning human nature. But moral philosophy reaches beyond descriptive questions, dealing also with so called prescriptive or normative questions.

Moral philosophical theories. There are many rival theories about what morality is and what it means to live morally. Historically, much of the debate in Western moral philosophy has focused on the conflict between judging the moral rightness of an act in terms of its consequences and judging its correctness in terms of absolute moral rules or virtues. According to utilitarianism, the rightness of an action is decided solely by what consequences it produces. The classical utilitarians, most notably Bentham and Mill, claimed that the only consequences that matter are changes in happiness. If happiness is equated with pleasure, this leads to ethical hedonism. Contemporary utilitarians have preserved the basic idea of consequentialism, but they have taken
other consequences than happiness, for example the satisfaction or violation of people’s preferences, into account as well. According to Kant’s *deontological* moral theory, the rightness of an action does not depend on its consequences or on any other situational factors, but rather on whether it accords with some absolute moral rule. Starting from this, Kant derived the categorical imperative, namely that you should act according to a maxim that you want to upgrade to the status of universal law. Furthermore, Kant emphasized that it is important to respect other human beings by treating them as rational agents who are responsible for their actions. However, today Kantians generally agree that the rules have to admit some exceptions (Rachels, 1999).

Other influential theories in Western cultures are based on a pessimistic view of human nature. For example, Hobbes put forth the idea of a *social contract*, that is, a set of rules that rational human beings have to accept, for the mutual benefit of everyone, on the condition that others will follow the rules as well. These rules are, according to this theory, needed to create an acceptable living, because without them human beings are selfish, brutal, and miserable creatures (Rachels, 1999). Eastern moral theories, on the other hand, often focus on compassion and altruism as a consequence of the interdependence, or even inseparability, of human beings, rather than on egoism and a civilization of the asocial nature of human beings. They are also more focused on the development of moral character, rather than on a calculation of morality of singular acts. Western philosophy has the similar notion of *virtue* ethics, which focuses on traits that make a person good rather than on specific behavior. For example, according to Gilligan’s *ethics of care*, a person should aim at being loving, loyal, and dependable, rather than behaving in that way just to fulfill duties. The focus of this theory is on small-scale personal relationships, because it incorporates the assumption that human beings are only capable of caring about those persons whom they interact with (Rachels, 1999). This brings up an important question, namely the scope of ethics. According to many moral theories, morality should be universal, in the sense of extending to all human beings. Others theories narrow the scope to a subset of all human beings, and yet others widen the scope so as to include all living beings.

Some philosophers have claimed that all moral theories contain plausible elements and that they can be synthesized into a universal moral system. What reasons requires, namely impartiality, what social living requires, namely adherence to a set of rules that should serve everyone’s interests, and people’s natural inclination to care about others, may work together to make morality natural (Rachels, 1999). Others are skeptic about any conception of universal truth
in ethics. For example, some anthropologists, struck by the immense cultural differences in conceptions of morality, have asserted that there are no absolute moral truths, but that moral rightness depends on customs and opinions within in a culture. This is the doctrine known as cultural relativism. But philosophers widely regard this doctrine to be flawed and to have intolerable consequences. The fact that different cultures have different ethical codes does not imply that there are no objective truths in morality.

Thinking versus feeling. Another dispute between different moral philosophers concerns whether reason or feeling is the primary source of moral judgments. Some philosophers, most notably Hume, have claimed that moral judgments are nothing more than expressions of subjective preferences, values, feelings, or opinions, and therefore they cannot be true of false. These philosophers claim that human beings have a built-in moral sense that creates a pleasurable feeling of approval toward benevolent and virtuous acts and a feeling of disapproval toward evilness and vice. According to this perspective, a moral judgment is similar to an aesthetic judgment (Haidt, 2001). However, moral philosophers today generally agree that moral truths do exist and that they can be reached through rational analysis of the reasons and arguments that back different judgments. This rational analysis is also claimed to demarcate morality from religion, because morality is, just like metaphysics, a matter of reasoning and analyzing arguments, rather than faith. This perspective has dominated moral psychology since Kohlberg (Haidt, 2001; Rachels, 1999) presented his famous model of moral development, during the cognitive revolution. Kohlberg compared the conscious and linguistic reasoning of human beings of different ages, by confronting them with moral dilemmas and assessing their reactions. This resulted in the construction of a stage-based model of the development of increasingly sophisticated moral judgments. According to this model, morality develops, as a result of an increasing social understanding, from obeying authority and avoiding punishment, through different forms of contractualism, to self-generated universal ethical principles. Despite its popularity in research, Kohlberg’s theory has been subjected to severe criticisms for being culturally biased and for taking a male perspective on morality (Cole & Cole, 2000).

Just recently, psychologists have begun to resurrect the place of feeling and automaticity in moral judgments. According to Haidt’s (2001) social interactionist approach, moral judgments are generally the results of quick and automatic evaluations, that is, of intuitions. Consequently, moral reasoning is by and large, to Haidt, nothing more than an ex post facto process, aimed at
justifying the intuition underlying a judgment and at influencing the intuitions of other persons. Although philosophers may override their intuitions and arrive at judgments by sheer force of logic, such processes do, according to Haidt, not represent how people in general reach moral judgments. Haidt and others have demonstrated that moral judgments often suddenly appear in consciousness as an affective valence, without the individual’s having any conscious awareness of having gone through steps of searching for and weighing evidence and inferring a conclusion. Furthermore, Haidt’s theory focuses on how the moral intuitions develop from social interactions and culturally based values. For example, an intuition of the moral rightness of fairness may develop from parental encouragement of fairness in play. Haidt’s theory diverges from the classical Humean theory in allowing for the existence of moral truths that can be perceived or intuited as true. The idea is that there is a universal set of emotional states that forms the basis of a limited number of universal moral categories (Shweder & Haidt, 1993). Today, both reasoning and intuition are acknowledged as important processes in making moral judgments and it is agreed that context may decide which process takes precedence. But the dispute over which of these processes is more fundamental continues.

The increased focus on intuition has shed light on the link between emotions and moral judgments. Haidt (2003) reviewed research on the emotions that underlie moral behavior and suggested that there are four basic categories of moral emotions. The first category is the other-condemning emotions of anger, disgust, and contempt, which make people condemn those that violate the moral code in society. These feelings make people feel a need to monitor and constrain their own behavior, because they want to fit into groups without triggering the other-condemning emotions. This leads to the second category of emotions, namely the self-conscious emotions of shame, embarrassment, and guilt. The third category is the other-suffering emotions of compassion and feeling distress at another person’s distress, which arise because of the human attachment system. They make human beings feel bad when other persons, or beings in general, suffer, and they incite a desire to alleviate this suffering. Research has shown that compassion is positively related to guilt and negatively related to shame. The last group of emotions is the other-praising emotions of gratitude, awe, and elevation. Unlike the other moral emotions, these emotions are responses to good deeds that make people moved rather than alerts that something is wrong. Psychologists have, until recently, largely neglected the last group of emotions.
Theory and research on moral beliefs, judgments, and behaviors. Moral psychologists have mainly interested themselves in the processes of reasoning and intuition that underlie judgments of the moral rightness of specific behaviors. Despite the scarcity of research on general moral beliefs, there are however clear indications of a connection between moral beliefs, moral judgments, and other worldview beliefs. But the link between moral belief and behavior is less clear. Forsyth (1980) proposed a two-dimensional model to categorize personal ethical ideologies and created a questionnaire to measure these two dimensions. He described the first dimension as a rejection of universal rules in favor of relativism. The second dimension, which he called idealism, is described as a belief that actions that are perceived as morally right will bring about desirable consequences. Unfortunately, the questionnaire lacks content validity in relation to Forsyth’s descriptions. His relativism dimension confuses absolute truths and absolute rules. The statements may be contingently associated with relativism, but they do not logically imply it. This dimension may be more appropriately described as a belief that situational factors should be taken into account in evaluating the moral rightness of an action. The second dimension is a Kantian position, because the items have an absolute character, containing words such as never and always, and they emphasize the dignity and welfare of individuals. Utilitarians are likely to agree with some of the items on the relativism scale that are really about moral truths, and they would probably score low on idealism. Thus, according to Forsyth’s description they would not believe that the right action will produce the best consequences, which is contrary to utilitarianism. Forsyth combined his two dimensions into a fourfold classification system and claimed that these categories correspond to the major ethical ideologies. However, the lack of conceptual clarity and content validity also renders this categorization flawed.

Nevertheless, interesting results have been generated by this research, as long as the meanings of the operationalized concepts are clear. Forsyth and colleagues have shown that the two dimensions are orthogonal and that both of them are negatively correlated with age and unrelated to Kohlberg-type measures of moral development. One study demonstrated a link between the relativism scale and beliefs in the moral rightness of conscientious acts that are adapted to specific situations rather than acts that are based on societal regulatory standards. The two dimensions are also correlated with measures of attitudes concerning contemporary moral issues such as abortion, euthanasia, marijuana use, death penalty, and so on. Individuals that are high in idealism and low in relativism, particularly males, tend to adopt more conservative positions. In
one study, the participants that were both high in idealism and low in relativism tended to be very harsh in their moral judgments, by condemning immoral acts more and attributing more responsibility to the actors, whereas the participants that were low in both relativism and idealism were the most forgiving judges. This difference was especially marked when the evaluations concerned actions that were aimed at producing positive consequences in spite of violating moral standards. In addition, the participants who were both high in relativism and low in idealism judged the actors who violated moral norms more positively than they judged those who did not violate any norms. Participants who were high in both idealism and relativism blamed actors less for violating a moral norm when the action produced positive consequences.

The link between these dimensions and behavior is less clear. In one study, Forsyth placed persons from his four different categories in a position where they were tempted to cheat. Although there was no difference in frequency of cheating among the groups, there was a difference in self-satisfaction and guilt after cheating. Persons who were both high in idealism and low in relativism and those who were both high in relativism and low in idealism devalued themselves after cheating, whereas persons who were low in both relativism and idealism reported greater self-satisfaction the more they cheated. Subsequent research has shown that idealists may even be more inclined to break moral rules in some settings than non-idealists. Individuals who are high in idealism and low in relativism feel more moral when they fail in a charitable action than when they fail in trying to secure personal gain (Forsyth, 1993). This research (Forsyth, 1993; Forsyth & Nye, 1990) has suggested that there may be a so called hypocrisy effect so that those who say that you should follow moral principles may actually be the ones that are most likely to fall prey to temptation to violate these standards. One plausible explanation is that the attitudes expressed by idealists are the results of social conformity rather than personally endorsed views.

In another line of research, Chiu, Tong, Fu and Dweck (1997) demonstrated that people’s conceptions of morality are related to their implicit theories about the world and other persons. Individuals who endorse entity theories believe in a fixed reality with a rigid moral order, where moral agents carry out the duties prescribed by the existing social order. They see morality as system-oriented and they want to preserve the status quo. Chiu et al. showed that entity theorists tend not to tolerate undesirable and deviant behavior and that they are more likely to enforce morality by imposing punishment and issuing moral directives than are incremental theorists.
Incremental theorists have a more dynamic view of reality. They believe that morality should preserve the rights and liberties of human beings, rather than prescribing actions from the authority of the existing order. They see morality as person-centered and they want society to change so as to promote the rights of people. Chiu et al. found incremental theorists to be more appreciative of good behavior and to believe less in punishment and more in negotiation and education.

Values

Some philosophers claim that axiology, the study of values, is the most important area of philosophy. Values refer to the phenomena that human beings believe are good and bad, how things should be, and how people should act. Some philosophers claim that moral beliefs can be reduced to values, whereas others claim that moral beliefs differ from values by involving reasoning (Rachels, 1999).

Theories on the nature and justification of values. Philosophers discuss whether values can be justified and if they can be objectively true in any sense. Some philosophers claim that values are not judgments at all. According to them, values do not express what individuals believe about something, but rather what personal attitude, or feeling, they have toward it. This theory is sometimes called value nihilism and it is often discredited because it is said to lead to irrationality, moral decline, and chaos. Others are impressed by the variability of values between different social and historical contexts and between different persons, and therefore they claim that values are mere social or personal constructions that are true in relation to a culture or to a person (Bergström, 1992). Yet another group of philosophers claim that the huge variation of values between different cultures is an illusion, because the same values are expressed in different ways in different belief systems, and that values indeed can be objectively true. They may claim that in most cultures life is valued, which reflects the fact that life is valuable, and that those who nevertheless do not agree are simply wrong. Lack of consensus does not imply relativism or nihilism (Rachels, 1999).

I will, in the following section, focus on what values people hold rather than what philosophical theories they hold about values, which is why I do not assimilate the value category into the categories of philosophical beliefs. To the extent that psychologists have been interested
in people’s own theories about value, it has been as an aspect of beliefs concerning morality and the meaning of life.

*Theory and research on the psychological structure of systems of values.* Regardless of what theory about the nature of values is correct, there is a widespread acceptance of the relevance of values to human activity, at both the individual and the social level of analysis. Psychologists assume that values have an individual function, shaped by the biological and psychological needs of each person, and that they play an important role in the socialization process. Values have been linked to the attitudes and personalities of individuals and to the maintenance and enhancement of self-esteem. Violation of values can result in guilt, shame, ego-deflation, and intropunitive reactions. People often evoke values in trying to justify their actions, to maintain face before others (Braithwaite & Scott, 1991). In addition, values play a crucial role in guiding individuals in the quest for purpose and meaning in life (Debats, 1996).

An important task for philosophers, anthropologists, sociologists, and psychologists is to investigate if there is any universal structure of values, that is, if values tend to cluster together in any specific way, and ultimately to explain why human beings hold the values they do. But, for a long time, psychologists had trouble conceptualizing values. This led to a wealth of different scales measuring different types of values concerning different things. The difference between what is generally desirable and what a specific person desires led to a problem with deciding what level of generality to focus on. Another issue is whether values are hierarchically organized according to their importance or not (Braithwaite & Scott, 1991).

To solve these problems, Rokeach (1968, 1973, see discussion in Braithwaite & Scott, 1991) presented a conceptualization of the value construct that today is widely accepted. He made a distinction between modes of conduct, or *instrumental values*, for example being helpful, and end-states of existence, or *terminal values*, for example a world at peace. He defined a value as an “enduring belief that a specific mode of conduct or end-state of existence is personally of socially preferable to an opposite or converse mode of conduct or end-state of existence”. This means that the term value refers to a single proscriptive or prescriptive belief that transcends specific objects and persons. Values combine to form value systems, which are embedded within a larger system of beliefs. Attitudes are also integrated into this system of beliefs. In Rokeach’s theory, an attitude is as a set of beliefs about a specific object or a situation, which is determined by values. Favorable attitudes emerge toward objects that are instrumental in the attainment of
important values. Furthermore, Rokeach postulated a cluster of beliefs, concerned with self-cognitions, that forms the innermost core of the belief system. This means that all beliefs, including values, serve to maintain and enhance the self-concept, according to Rokeach. He further assumed that values are hierarchically organized, so that when two values come into conflict one can be prioritized by way of its position within the hierarchy. For example, for persons who believe that happiness is the meaning of life, happiness may form a superordinate value, and whatever they believe promotes happiness will be valued derivatively. These persons will form positive attitudes toward things that they believe will help them to attain the things they value and ultimately to obtain happiness. Therefore it is in the final analysis, as Braithwaite and Scott (1991) point out, questionable if modes of conduct and end states really can be distinguished from each other.

Despite this increased conceptual clarity, psychologists have had problems finding clear patterns in people’s systems of value. A major problem is that there are many different measures employing different methods of assessment and investigating different domains of values. Value measurement has focused on abstract philosophical issues that transcend cultural boundaries, on goals, ways of behaving, and states of affairs that are valued in Western societies, and on personal, interpersonal, or moral behavior that is viewed as desirable in Western cultures (Braithwaite & Scott, 1991). Braithwaite and Scott (1991) reviewed the most prominent measurements and found seven themes that recur in factor analyses: (1) concern for the welfare of others, (2) status desired or respected, (3) self-control, (4) unrestrained pleasure, (5) individualism, (6) social adeptness, and (7) religiosity. The two most popular scales are The Value Survey and The Study of Values. The Value Survey was constructed by Rokeach to measure 18 instrumental and 18 terminal values. Psychologists have failed to find a clear factorial structure in this questionnaire. The Study of Values is intended to measure six, a priori derived, personalities that value different things: (1) the theoretical person, who is intellectual and tries to discover the truth, (2) the economic person, who has a practical nature, (3) the aesthetic person, who looks for form and harmony in the world, (4) the social person, who values others and is altruistic and philanthropic, (5) the political person, who seeks power and influence and (6) the religious person, who seeks communion with the cosmos.

To find order in the chaos of different dimensions of values, Schwartz and Bilsky (1987) tried to specify a theoretical rationale to elucidate the structure of values. They started from the
assumption that values are cognitive representations that arise because of three types of universal human requirements: (a) biologically based needs of the organism, (b) social requirements for interpersonal coordination, and (c) social institutional demands for group welfare and survival. In order to cope with reality, human beings must recognize and respond to these requirements, which results in the acquisition of values. Next, Schwartz and Bilsky specified eight domains of values: (1) the enjoyment domain, which includes physiological gratification, happiness, comfort, and cheerfulness, (2) the security domain, which includes values at both individual and group levels, such as inner harmony, a world at peace, and family security, (3) the achievement domain, which includes competence and success, (4) the self-direction domain, which includes values that have to do with exploring, understanding, and controlling the world, such as autonomy, self-sufficiency, and creativity, (5) the restrictive-conformity domain, which includes values that emphasize the restraint of impulses and the inhibition of actions that may be harmful, such as obedience, politeness, and self-control, (6) the prosocial domain, which has to do with a concern for the welfare of others, expressed in altruism, benevolence, and kindness, (7) the social power domain, which emphasizes values that have to do with control, such as power, leadership, and authority, (8) the maturity domain, which involves values that embody an appreciation of the social and physical reality as it is, such as wisdom, tolerance, faith in the personal convictions, deep emotional relationships, and appreciation of beauty. Schwartz and Bilsky let a large number of participants from Israel and Germany fill out Rokeach’s scale, whereupon they concluded that the participants did indeed discriminate among values according to the a priori specifications. In addition, most of the value domains could be categorized as either individualistic or collectivistic. Self-direction, achievement, and enjoyment represented the individualistic side of the multidimensional space and security, prosocial, and restrictive-conformity represented the collectivistic side. Maturity contained both individualistic and collectivistic elements. Schwartz and Bilsky also found support for Rokeach’s distinction between terminal and instrumental values.

The universality of values. Many of the available measurements of value exhibit a clear cultural bias in their focus on individualistic values. Conducting research from a narrow Western perspective imposes serious limitations on the conclusions that psychologists are allowed to draw (Bond, 1988). In addition, critics have claimed that an overrepresentation of individualistic values in society may lead to alienation, narcissism, isolation, joyless consumption, and violence (Shan
However, one scale has been constructed with the explicit purpose of taking collectivistic values into consideration as well, namely the East-West scale. This scale measures two Western and Eastern prototype orientations in belief systems. The Eastern perspective is represented by beliefs in the oneness of human beings, nature, the spiritual, and the mental, and in the subsequent undesirability of analyzing, categorizing, manipulating, and consuming things in the world. The Western perspective is more dualistic, in maintaining divisions between man, nature, and the spiritual, and it contains the idea that human beings must manipulate nature to ensure their own survival.

However, the bias concerns not only the content of the scales, but also the sampling of the participants. Few multicultural studies have been done in this area, and those that have been done often impose a priori groupings on the results. In an effort to search for universal dimensions of value, Bond (1988) took a more exploratory approach. He distributed a questionnaire with values that are regarded highly in China to participants from 21 different cultures and he also let participants from 9 different cultures fill out Rokeach’s questionnaire. The answers were analyzed with ecological factor analysis, yielding dimensions of cultural variation rather than individual variation. The first scale rendered two dimensions: (1) social integration versus cultural inwardness, that is, prosocial virtues such as tolerance, patience, and harmony with others versus loyalty to family and culture, and (2) reputation versus social morality, that is, standing in society versus a life-style that is based on principles and decency. In Rokeach’s scale, Bond found four dimensions: (1) competence versus security, that is, intellectual skills versus a safe and peaceful world, (2) personal morality versus success, that is, moral virtues such as helpfulness, forgiveness, and honesty versus social recognition, power, and a comfortable life, (3) social reliability versus beauty, that is, socialized virtues such as politeness and responsibility versus appreciation of beauty, (4) political harmony versus personal sociability, that is, a vision of world peace and equality versus interpersonally attractive qualities such as cheerfulness, cleanliness, and love. Bond found that reputation versus social morality was strongly negatively correlated with social reliability versus beauty, so he concluded that five dimensions of the original six could be extracted from these questionnaires by synthesizing them. He further hypothesized that social integration versus cultural inwardness may be related to making weak or strong discriminations between in-groups and out-groups, that competence versus security may be related to risk-taking behavior, and that personal morality versus success may be related to
Tomkins’ theory of personal ideology

Theory and research

Tomkins’ (1963, 1965) theory of personal ideology addresses questions about both the contents of the worldviews and their development from both an individual-focused and a societal perspective. A strength of this theory is that it is embedded within a larger theory of human functioning. Tomkins had an ambition to explain the heterogeneity of human personality through the integrated functioning of the cognitive and motivational system. Instead of starting from a trait-, type, or self-concept theory, Tomkins postulated scenes and scripts as the primary units of analysis of personality. Scenes are affect-laden episodes that are stored in memory. They include persons, place, time, and actions that are associated with affects. According to Tomkins, the affects are innate biological mechanisms that play a central role as motivators of human action, because they amplify experiences, in giving them a sense of urgency and importance. Tomkins’ affect theory encompasses the positive feelings of joy and excitement, the negative feelings of anger, contempt, disgust, distress, fear, and shame, and the resetting affect of surprise (Carlson & Levy, 1970). For the scenes to retain importance in the long run, they must become interconnected to form scripts. This occurs through the process of psychological magnification. This means that the perception of similarities and differences between old and new experiences leads to generalizations that make the scenes coassemble into scripts. The scripts generate rules for predicting, controlling, responding to, and attaching meaning to events. Thus, constructions of the past can be changed by later experience, and anticipation of the future may color the present and revise the past. The scripts vary greatly in content, importance, and interconnectedness (Carlson & Levy, 1970).

Ideology scripts. The most important and complex type of script is the ideology script. An ideology, or an ideological posture, is a highly organized set of ideas that a person is very articulated and passionate about, although there is no evidence that can make the person certain of it. Tomkins emphasized the uncertainty of the ideas, claiming that the lack of evidence is filled with a passion and a faith that human beings seem unable to live without. However, according to
Tomkins, not all human beings ever develop a personal ideology, that is, the personal ideology constitutes an elaborate part of the worldview. But, all human beings do have ideo-affective postures, which form the basis for the development of ideologies. An ideo-affective posture is a set of loosely organized feelings and ideas about feelings that is developed through socialization experiences with the parents. If an individual is exposed to an ideology that is sufficiently similar to his own ideo-affective postures, this will engender a relation called ideo-affective resonance between the ideology and the ideo-affective postures, which usually leads to the adoption of the ideology. This makes for the integration of personality, because ideo-affective postures and ideologies that resemble one another reinforce and strengthen each other and elements that do not fit are removed.

Tomkins drew on Wittgenstein’s (see Hamlyn, 1994) concept of family resemblance to explain ideo-affective resonance. The ideo-affective posture must have some properties that correspond to, and thus can be mapped onto, analogue properties of the ideological posture for the two to resemble each other. Exactly how feelings and ideas about feelings can resemble ideas in general is not explained in Tomkins’ writings. Instead of a closer investigation of the meaning of the concept of ideo-affective resonance, he addressed its extension, by pointing out ideologies that were prevalent in society and their corresponding ideo-affective postures. Tomkins diverged from mainstream psychology not only in theorizing, but also in methodology. He emphasized the importance of studying the cultural products of man as a complement to the study of the causal mechanisms that underlie behavior. So, he studied the history of Western thought (Tomkins, 1965), and subsequently also Eastern thought (see Demos, 2004), and found a pervasive polarity in thinking about human affairs. He called the two sides of the polarity humanism and normativism. Humanists see mankind as an active, creative, and loving force. They see human beings and their experiences as the source of all meaning and value so that positive experiencing should be maximized and negative experiencing should be minimized. According to the normativists, on the other hand, there is a realm of essence, or standards, which exists independently of space, time, and human experience. Because they view this realm as the source of all meaning and value, they believe that human beings should strive toward it through conformity to norms and rules. Humanism and normativism combine to create a fourfold category-based worldview model. Tomkins gave Kant’s synthesis of realism and idealism on the one hand, and of personal and universal morality on the other hand, as an example of a
combination of humanism and normativism. He found expressions of these four categories in a
diverse group of domains such as metaphysics, epistemology, theology, philosophy of science,
mathematics, law, aesthetics and art, and theories on perception, value, child rearing, politics,
psychotherapy, and personality (see Tomkins, 1963, 1965).

**Socialization of the ideo-affective postures.** According to Tomkins, individuals who have
ideo-affective postures that correspond to humanism have an open and accepting posture toward
their own experiences and feelings. This makes them feel positively about other people and
themselves. If the parents play with their children in shared delight and bestow them the feeling
of being ends in themselves, of being efficacious in controlling their environment, and that shared
human interaction is a deeply satisfying experience, this will lead the children to develop ideo-
affective postures that resemble humanism. Such children will come to value happiness and
satisfaction in themselves and others. They develop a predisposition to react to events with joy,
distress, fear, and shame. Individuals who have ideo-affective postures that correspond to
normativism have a defended and rejecting posture toward their own experiences and feelings,
which makes them feel negatively about themselves and other persons. Children develop
normativistic ideo-affective postures if the parents try to mold them into norms of morality,
manners, competence, and independence. In these cases, the children’s feelings and wishes are
set aside in favor of behaviors that the parents demand. The result of this is a renunciation and
devaluation of the personal wishes and thereby of the self. This posture ingrains a predisposition
to react to events with excitement, surprise, contempt, disgust, and anger. In addition to these two
prototypical ideo-affective postures, Tomkins mentioned three examples of mixed socialization.
The two parents may have different ways of interacting with the child, they may swing in their
parenting styles, or they may have parenting styles that mix humanistic and normativistic styles.

**Differences between humanism and normativism.** In his most comprehensive description of
the differences between humanistic and normativistic assumptions, Tomkins (1963) elucidated
ten major assumptions of these ideologies:

The first and most important assumption is whether man is an end in himself or if the valuable
exists independently of man. For the prototypical humanist, everything that improves and
perpetuates man’s existence is valuable and whatever destroys or threatens it is of negative value.
For the prototypical normativist, man can only become valuable by participation in, conformity
to, or achievement of a norm. This postulate has a number of derivates. For the humanist, human
beings are inherently good and must be corrupted to become evil, unconditional love and respect should be directed at all human beings, and all achievements should be responded to with respect, joy, pride, and confidence. Furthermore, the humanist has a positive attitude to affects per se. Reason is valued as a guarantee than man can keep a distance from, and rise above, the immediate sense experiences, rather than as a restraining force on the affects. For the normativist, human beings are inherently bad and have to work hard to become good, they should be loved and respected only to the extent that they have obtained value through norm achievement, compliance, and conformity, and achievements should be treated with temperate enthusiasm and a hit of contempt for human frailty. The normativist is uneasy about, and intolerant of, affect per se, because it jeopardizes rational control of behavior and norm achievement. Reason is regarded as a source of much error in knowledge acquisition, and therefore it must be controlled by the authority of the external norm, which impresses itself through the senses. Instead, reason should be used to control the drives and affects, according to the normativist.

The second difference is whether man is believed to be the most real entity in nature or not. Tomkins observed that worldviews that see man as the most valuable phenomenon also tend to ascribe man a high ontological status.

The third difference is that humanists see values as human wishes or affects defined by human beings, whereas normativists believe that values exist independently of human beings.

The fourth assumption is, on the humanism side, that human beings should satisfy and maximize their drives and affects, for example sex, hunger, work, play, novelty, risk, and familiarity. Moreover, the humanist stresses those forms of knowledge acquisition that are based on intimacy between object and subject. But, at the same time, the humanist values detachment, perspective, and rational analysis, because seeing an object in its relatedness to other objects contributes to the understanding of the object. Whether intimacy or detachment is stressed depends on the cultural climate. The normativistic side of this polarity is that human beings should be governed by reason, and follow norms for achievement, manners, and morality which modulate their drives and affects. For example, play is rejected as childish. The normativist is skeptic of both too great intimacy to and too great detachment from external objects, fearing both the seduction of the senses and the undermining of the authority of the real world.

The fifth assumption is, for the humanist, that drive dissatisfaction (e.g. hunger and sex) and the occurrence of negative affects (e.g. fear, shame, distress, and aggression) should be
minimized. Humanists emphasize the individual’s right to life, liberty, and happiness, as well as freedom from fear, humiliation, distress, and from reason for anger. Normativists, on the other hand, regard the minimization of drive satisfaction and negative affects as either neutral or as an impediment to norm conformity and norm realization. They believe that individuals should control their aggression, but, at the same time, norm violators are the proper objects of contempt and should be punished by aggression from authorities. In the philosophy of science, humanists favor the logic of discovery, the use of imagination, and the maximization of the positive affects of excitement and enjoyment. Normativists prescribe the logic of confirmation, discipline and rigor, minimization of error, and contempt against those that fail to meet up to the standards.

The sixth difference is that humanists believe that affect inhibition should be minimized, whereas normativists believe that affects should be controlled by norms. Humanists value the free expression of emotions and openness to, and tolerance of, intrusions from the irrational. Normativists value control of affects in the interests of morality, achievement, piety, or classic beauty, and they urge hostility toward those who challenge the good, the true, or the beautiful.

The seventh difference consists in beliefs concerning the purpose in which power should be sought. Humanists believe that the maximization of power should be instrumental to the maximization of positive affects and the minimization of negative affects. They stress the protection of individuals’ rights and dignities and the need for a strong resistance against pressures for conformity when these threaten the maximization of positive affects and the minimization of negative affects. Normativists believe that power should be maximized in order to maximize compliance with, and achievement of, norms such as being virtuous, being pious, amassing wealth, and striving for perfection.

The eighth difference is that humanists believe that conflict between affects within the individual and between individuals should be minimized, whereas the normativists are indifferent about such conflicts and order affects according to what norms they further.

The ninth difference is that humanists believe that conflicts between affects should be resolved by maximization of positive affect and minimization negative affect, whereas normativists favor the affect that is higher in the normative hierarchy.

The final of these main differences is that humanists believe in tolerance and amelioration of the weaknesses and frailties of human beings, whereas normativists believe in intolerance and punishment.
Attitudes in many other areas can be derived from these polarities. For example, Tomkins describes the humanist as open to the mystical and to the spiritual, which is a noteworthy difference between the humanism described by Tomkins and the intellectual movement usually referred to as humanism (Sommer, 2002).

**Historical origins of the polarity.** In the perspective of human history, Tomkins traced the emergence of these polarities in human thought to social stratification and exploitation, which occurred due to perceived scarcity of resources and struggles for survival. Violence and warfare spread, from being directed at animals, to being directed at human beings as well. This stratification was further spread to age, sex, and class, and also to the relationship between god and human beings in religious contexts. The ideal warrior was a normativist. He was excited, ready for surprise, angry, proud, contemptuous, and fearless. The humanist on the other hand was one who had given up, who was relaxing in dubious enjoyment or crying in distress, terrified and ashamed. In fact, Tomkins (see Demos, 2004) originally called the humanistic ideology left-wing and the normativistic ideology right-wing, in accordance with a widespread symbolism manifested in religion as well as politics. The left represented the oppressed and exploited and the right represented the warrior oppressors. The left also came to be associated with femininity and the right with masculinity. According to Tomkins, normativist ideologies have historically been directed at defending and protecting the current society against change, whereas humanists have struggled to change society so as to minimize problems and suffering. Finally, Tomkins believed that the polarity in thought occurs within ideologies, and that different families of ideologies are in reality often orthogonal.

**Empirical research.** Tomkins originally constructed a questionnaire, called the polarity scale, to assess personal ideologies. This questionnaire presented research participants with one humanistic and one corresponding normativistic statement at a time, asking them to choose one of these statements, both, or neither. Tomkins’ (1963) initial experiments, using this questionnaire, gave his theory tentative support. He concluded that there was indeed a consistent pattern in the expression of ideological orientations that spanned over areas such as attitudes toward human nature, science, the purpose of the government, pluralism and hierarchical selectivity, and feelings at large, sympathy and love of children and childish play, and sociophobia versus sociophilia. He also employed implicit measurement techniques and behavioral measures. This showed that humanism was more related to general sociophilia,
whereas normativism was only related to sociophobia when it comes to physical contact between men. Furthermore, when participants in Tomkins experiments were presented faces with different affects to each eye, the humanists tended to see the happy faces and the normativists tended to see the contemptuous faces. In another study, humanists were found to smile more frequently when talking to an experimenter, and they responded more frequently with shame, whereas normativists showed more disgust. Tomkins (1965) and Carlson (1984) have shown that humanists describe their interaction with the world with taste imagery, whereas normativists describe themselves as smelling experiences in a more distant manner. Carlson used this imagery in showing that humanists see themselves as more intrinsically involved with other people and that they experience more resonance with interpersonal values than do normativists, and that normativists experience more resonance with individualistic values than do humanists. He also found that humanistic students were more affectively responsive to educational experience. In another study, he let participants construct plots for a television drama with the theme of human emotions. Interpersonal themes were more frequent in scenes based on joy as compared to excitement, and shame as compared to fear, and women were much more inclined to create plots with interpersonal themes than were men. The interpersonal themes received the most psychological magnification.

An important finding from later research is that humanism and normativism, as assessed with the polarity scale, do not seem to be polar opposites as Tomkins originally thought. Rather, they appear to be orthogonal. Thomas (1976) used Q-methodology to show that normativists and humanists have different concerns. The actual humanists were quite similar to Tomkins’ theorized humanist, but the actual normativists deviated from what Tomkins theory had predicted. This result has been replicated in later studies. Studies have also consistently shown that people in general tend to favor humanism over normativism and that women tend to be more humanistic than men (Stone & Schaffner, 1997).

In another group of studies, de St. Aubin (1996) investigated the emotional foundation of personal ideology and its manifestation in value systems, religiosity, political orientation, and assumptions concerning human nature. He transformed the polarity scale, from the original format used earlier, to a likert-format. Thus, he decontextualized the items and used the scale as a dimensional, rather than categorizing, measurement. Through autobiographical interviews, he discovered that humanists are more likely to describe significant life episodes that contain the
affects of joy, distress, fear, and shame, whereas the memories described by the normativists contained relatively more anger. Moreover, humanism correlated positively with the values of mature love, imaginative, broad minded, and world of beauty and negatively with cleanliness and politeness on Rokeach’s (1973, 1979) questionnaire; normativism correlated positively with social recognition and politeness and negatively with imaginativeness. Regarding beliefs concerning human nature, humanism showed a strong positive correlation with trustworthiness and altruism, a less strong correlation with complexity, and no correlation at all with independency; normativism correlated negatively with altruism. In politics, humanism correlated positively with liberalism and voting for the democrats and negatively with political conservatism and voting for the republicans; normativism correlated negatively with both liberalism and voting for the democrats. Furthermore, humanists tended to see divinity more as a human expression than as a rule-based force that exists outside of humanity. Including the domains of religiosity, political orientation, and assumptions concerning human nature, de st. Aubin was able to predict humanism with significant predictors in all domains. For normativism no such model could be constructed. In another article, de st. Aubin (1999) developed his thoughts on how Tomkins’ theory can be used to elucidate the content, structure, and development of religious beliefs.

An area of special interest is the relationship between personal ideology and psychological health. De st. Aubin (1999) has claimed that both humanism and normativism in themselves contain aspects of immaturity and that an integration of the two may be the most mature approach. Andersson and Möller (1998)\(^1\) investigated the relationship between personal ideology and psychological health, by relating personal ideology, as assessed with de St. Aubin’s scale, to attachment and to a measure of use of defense mechanisms. Humanism correlated positively with regression and compensation, and normativism correlated positively with projection and intellectualization. Regression means going back to more immature stages of development so that impulsive and childish behaviors can be expressed, and compensation means exaggerating positive aspects of the self. Projection means blaming other people and being overly critical, and intellectualization means having a need to control social relations. A total of 6 out of 8 defensive mechanisms correlated positively with normativism; 5 out of 8 correlated positively with humanism. Moreover, by splitting high scorers and low scorers into two groups on both scales,\(^1\)

---

\(^1\) Because of a misprint in de St. Aubin’s (1996) article, Andersson and Möller (1998) used an erroneous scoring procedure that distorted their data analyses. The data from this study have therefore been reanalyzed.
humanists and normativists were classified into four categories. Although the amount of participants was too low for certain conclusions, some indications can be discerned in the data. Members from the four groups were evenly distributed over the four attachment groups, with two exceptions. First, not a single participant in the high normativism/low humanism group was classified as preoccupied. Second, all of the four fearful individuals in the sample were high in normativism and three were also high in humanism. In another study, Readett (2002) showed that a group of persons who took part in psychotherapy became more humanistic. Moreover, Stone and Schaffner (1997) report a number of interesting correlations. Humanism has been found to correlate positively with positive affect, openness, agreeableness and empathy, and negatively with authoritarianism and social dominance; normativism has been found to correlate positively with negative affect, authoritarianism, social dominance, and introversion, and negatively with positive affect, openness, and agreeableness. Being high on both scales has been found to correlate positively with authoritarianism. Personal ideology has also been addressed in other studies, especially in political psychology, in relation to other concepts, such as political conservatism (Jost, Glaser, Kruglanski, & Sulloway, 2003).

Some contemporary ideologies that express humanism and normativism

Descriptions of ideologies or worldviews as being shared by persons or cultures abound in the relevant literature. These descriptions include a focus on specific religions (e.g. Josephson & Peteet, 2004; Smart, 1998; Inglehart & Baker, 2000; Sire, 2004; Naugle, 2002), contemporary religion and spirituality (e.g. Fisher & Smart, 1998; Forman, 2003), the geographical regions of the world (e.g. Smart, 1998), and the history of science and philosophy from a sociological perspective (e.g. Gustavsson, 1988). The principle of ideo-affective resonance makes this societal perspective relevant to understanding contemporary expressions of humanism and normativism from an individual-focused perspective. I have chosen to delve deeper into three broad families of ideologies that I believe will, theoretically and empirically, illuminate expressions of humanism and normativism in the specific time and place in which the present research was conducted.

Existentialism and humanistic psychology. Existentialism is notoriously hard to define. The term is associated with names of famous thinkers such as Sartre, Kierkegaard, Nietzsche, Heidegger, Kafka, and Camus, who all lived in the 19th and 20th century. There is considerable diversity between the philosophies of these thinkers, which is further complicated by the fact that
some of them in fact renounced the label of existentialism. In this brief description of existentialism, I will not attempt to do justice to the idiosyncrasies of the complex philosophies of these thinkers – I will merely outline some common features of existentialistic thinking in order to try to discern its humanistic and normativistic elements. I have relied mainly on Barrett’s (1958) introduction to existentialism and Kaufmann’s (1975) anthology of the basic writings of existentialism.

The existentialists revolted against traditional philosophy and its abstract and systematic reasoning. They claimed that even though rational clarity is desirable when possible, the most important questions in life are accessible only in personal existence and experience and not through reason or science. Existentialists also tend to see human beings as unique and isolated individuals that are stranded in a world that is in itself devoid of meaning, and that human lives are also, facing inevitable death, meaningless. In other words, they reject any idea of an external source of meaning, claiming instead that an individual can imbue aspects of the world with personal meanings by acting upon them. Thus, by facing the meaninglessness of the world and life within it courageously, individualys can realize that they are completely free to choose or create their own meanings. This human predicament is sometimes described as absurd or ambiguous in a way that cannot be fully understood and expressed with language.

With total freedom come limitless possibilities and limitless potential, as well as complete responsibility. Because of this, existentialists believe that an individual always has an underlying stream of existential or ontological anxiety – a form of doubt – because he is constantly confronted with possibilities to choose. This feeling is an inevitable consequence of existing and it will guide an individual toward authentic existence if it is accepted rather than repressed. To be authentic means to define the self through personal choices of beliefs, goals, meanings, and actions, rather than resorting to the opinions of other persons and to the assimilation of socially and culturally desirable ideals. Attempts to repress the feeling of ontological anxiety will, on the existentialist view, lead to the assimilation of guilt toward the self for failing to live authentically, and it will tie the individual to the past, constraining him or her from living fully in the present moment. The function of ontological guilt is thus that it alerts the individual that something is wrong, thereby guiding him or her back toward authentic existence. Accepting ontological anxiety can however also lead to problems, because the sense of limitless potential may overwhelm the individual with feelings of anxiety, helplessness, loneliness, and despair, perhaps
even engendering nihilism. Existentialists are therefore often driven to the conclusion that a personal framework of meanings, or “a personal truth to live and die for” in Kierkegaard’s words, is the only solution to how to avoid the despair of meaningslessness while accepting the existential predicament. In fact, authenticity is often described as the equivalent of finding some truly personal goals and values to commit the self passionately to. Exactly what this framework consists in, for example if it is religious or areligious, seems to be less important.

So how is existentialism related to the five categories of belief that I have specified? The existentialists do share the materialist emphasis on accepting existence as it is, however dark it may be, and on avoiding illusions that function to divert anxiety. But this does not imply that an authentistic and anxiety-accepting worldview must necessarily be materialistic, because those aspects of a worldview simply do not concern spiritual existence as much as they concern material existence in the existentialist case. Existentialists also have the belief, commonly endorsed by spiritualists, that the mind elevates human beings over other physical objects and animals, and the desire to bring experience back into focus in place of the mechanical and lifeless forces of technology. Regarding epistemology, the existentialists believe that a person’s knowledge of what counts in life is rooted in personal experience, that is, it is highly relative to human experience and unique for each person, leading to empiricism, or a weak form of rationalism, and often also relativism about the truth. Moreover, existentialists believe that an individual is defined by his own unique history of personal choices and constructions rather than by a common human nature. Human nature is seen, at most, as a set of shared potentialities in creating a personal existence. This view of human nature raises the question of whether all acts are equally morally acceptable. Because it is, on the existenialist account, impossible to find an ultimate justification for a choice, an individual must choose in accord with the authentic nature of the self and take responsibility for it. But if the individual can choose his self freely then it seems that he can also justifiably choose to act in whatever way he may like. However, a free choice is not necessarily an authentic one, because it may be in disharmony with the ontological anxiety, and there may be a human nature that drives the production of ontological anxiety, thereby putting constraints on the range of choices that may be authentically free. Sartre, for example, came to the conclusion that individuals choose for everyone who is affected by their choices, and that a genuine freedom therefore incorporates a respect of, and desire for, the freedom of other individuals. Finally, an existentialistic theory of values is that human beings
create or discover personal values that are more or less beneficial or perhaps even more or less correct. The beneficial or correct values are primarily freedom and authenticity and their derivates.

Existentialism found its way into psychology and psychotherapy through Binswanger, May, Yalom and humanistic psychologists such as Rogers and Maslow. Humanistic psychology is rooted in existentialism, but it incorporates a much more optimistic outlook on human beings and their lives. The basic idea is that every individual has a unique potential to fulfill and an inner drive toward actualizing this potential and becoming authentic, which will flourish unless it is constrained by the environment. Humanist psychologists identify process of being self-actualizing, during which individuals functions fully, with the true human nature. According to Rogers (1961), self-actualizing persons are open to experience, they live in the present, they trust the authentic self; they feel free in making choices, and they are creative and productive in contributing to the actualization of others. Rogers further claimed that unconditional positive regard from the environment promotes an individual’s self-actualization, whereas a restriction of the positive regard to certain conditions leads the individual to develop neurotic tendencies (Rogers, 1961; Pervin, 2001). In Tomkins’ terminology, a humanistic rather than normativistic parenting style contributes to self-actualization.

The existentialistic perspective is important, not only because of its entrenchment in psychology, but also because it fits well with contemporary Western societies. The increased plurality of perspectives, and the consequent lack of clear guidelines for life supplied by culture, coupled with a strong individualism has led to a focus on personal potential and choice and self-reflexivity. This may make the existentialist perspective appealing to members of Western societies, but it may also make existentialism especially relevant for understanding the worldviews of members of these societies.

Modernistic buddhism and spirituality. The societal changes have not only reinvigorated existentialism, but they have also resulted in a transformation of religiosity. During the last decennia, with the trends of increased globalization and postmodernization, religiosity has undergone profound changes in Western societies. The intolerance of dissidents and the passive adherence to the religious doctrines inherent in the traditionalist theistic religions and the sharp differentiation between different religious stances have been replaced by a process of active construction of the personal spirituality, characterised by openness, tolerance, and eclecticism
According to Forman (2004), the fundamental ideas of different religions have somehow merged into a core of beliefs that cuts across different traditions, resulting in a rather diffuse movement of spirituality rather than traditionalistic religiosity. The discovery of Asian thought, especially Buddhism, has greatly influenced this development. Several characteristics of Buddhism, such as the optimistic message, the practical techniques, and the focus on personal development, tolerance, holism, and logical reasoning rather than dogma, that are attractive in contemporary Western culture, permeate the spirituality movement. In fact, the beliefs that form the core of the spirituality movement, that Forman has found, could easily be construed as a variant of Buddhism. Moreover, there has been a surge of interest in this modernistic Buddhism in science, and some even proclaim it to be a second renaissance for Western cultural history (Revel & Ricard, 1999). For example, meditation techniques based on mindfulness have, in comparison with regulation based on contingent self-regard, proved to promote well-being and reduce stress (Brown & Ryan, 2003). Transpersonal psychologists also study strong emotional experiences of peacefulness and tranquillity, harmony with the universe and a sense of profound understanding. Dialogues are currently underway to syncretize Western and Eastern philosophy, by letting either perspective illuminate the other, acknowledging Buddhism as a philosophical system and not just a religion (e.g. Goleman, 2003; Revel & Ricard, 1999).

Buddhist thought is especially interesting in this context, because it contains both intensely humanistic and intensely normativistic elements, which is based on the split of reality into two disparate ontological spheres. For the buddhist, there is indeed a realm of essence that exists independently of the constructed ego, but the actual essence or nature of human beings is contained within this realm of essence. The normativistic elements are emphasized by the old schools of Theravada Buddhism, which focus on tradition, self-discipline, devotion, and divinity as a transcendental force. The humanistic aspects of Buddhism are more stressed by the relatively newer Mahayana traditions such as Tibetan Buddhism and Zen Buddhism, which focus more on compassion and see divinity as personal force. I will try to outline some of the fundamentals of Buddhist thinking, using different perspectives such as Revel and Ricard (1999), Goleman (2003), Eliade (1969), and Fontana (2003).

According to the legend, Buddha once formulated four noble truths, namely that: (1) life is characterized by dissatisfaction, or suffering, (2) dissatisfaction is caused by ignorance and the
negative feelings of desire and wrath in their destructive forms, (3) dissatisfaction can be
terminated, and (4) there is a way to achieve this termination. So the purpose of life for buddhists
is to eliminate suffering and promote happiness. But, in comparison to Western psychotherapy,
this effort is much more directed at modifying the perspective of the world than at changing the
material world. Buddhists believe that all suffering is rooted in illusions about the world, and that
human beings must dispel these illusions and discover the true nature of the world, thus
becoming enlightened, in order to eliminate suffering.

The prime illusion that human beings entertain is, according to a buddhist worldview, the
belief that there are permanent and autonomously existing entities underlying the phenomena that
they perceive. Buddhists say that the perceived phenomena are in this sense empty of
independent existence, existing only in relation to the perceiving subject, and that distinctions
between different phenomena are therefore arbitrary human creations. Instead, they see the world
as a continuous, perpetually changing, flow of events that changes the contents of people’s
consciousness every single moment by way of sense impressions and uncontrolled thoughts.
Although they sometimes concede the metaphysical possibility that there is a material reality that
exists beyond any perceptions of it, such as Kant’s noumenal world, they believe that it is
meaningless to postulate a reality that human beings never can acquire knowledge about. But,
buddhists are neither nihilists nor idealists. They do believe that there is an inner nature of the
world, beyond time, existence and non-existence, change, and stillness, and unity and plurality –
a sphere of absolute truth – that can only be reached by grasping the emptiness of material
phenomena, thereby dissolving the myth of a dualism between existence and non-existence and
between self and other. Within some traditions, the material phenomena are said to be completely
devoid of existence, whereas others concede the phenomena to have some kind of existence albeit
with an ontological status that differs from the sphere of absolute truth.

A derivative of the alledged myth of autonomously existing phenomena is the myth of an
autonomously existing and persistent ego. According to Buddhism, there are different layers of
consciousness, and what human beings perceive as their self is usually a superficial layer – often
referred to as the ego. Throughout life, layers of artificial beliefs about the self are added to the
ego, because the individual is conditioned by living in a specific time and place, immersed in a
specific culture. Because the contexts that create the conditions of living are arbitrary, so are the
egos that they engender. According to buddhism, the individual must, in order to reach the inner
human nature and escape things like self-obsession, anxiety, and narcissism that cause suffering, peel these layers off. The inner human nature is described as a glow of compassion, warmth, and humility, and an urge to eliminate all suffering, regardless of subject. That the true nature of human beings exists outside of space and time implies that the true self cannot be reincarnated. Buddhists do however assume that an individual is reborn in the sense that the self is embodied in different physical forms, as long as the individual has not been liberated from this illusion. What form of existence the self will embody after the current existence is terminated is said to depend on the *karma* that the individual has accumulated through his free choices. Although buddhists believe that the human is free in his choices and responsible for his actions, they also believe that there is a deeper purpose behind everything that happens. Furthermore, buddhists believe that consciousness cannot be studied from the outside, with techniques of physical measurement, as Western scientists try to do. Rather, they study it from the inside, through personal introspection. By investigating their impressions and beliefs through meditative contemplation and rational analysis, they believe that human beings can break the flow of self-centered thoughts and feelings, which is responsible for dissatisfaction, and reach inner stillness. The form of happiness that is desirable according to buddhism is the continuous sense of inner peace and harmony that comes with an enlightened mind, in contrast with temporary euphoria or passion. But, are the methods for obtaining an enlightened state of knowledge empiricistic or rationalistic? Buddhists urge a symbiosis between thought, feeling, and action. Thus, most Buddhists acknowledge both experience and reason as important for reaching enlightenment, although the emphasis may shift between traditions. These differences in emphasis engender different routes to enlightenment that are said to cater for the individual differences that are caused by different conditions of life.

Buddhism is humanistic in the optimistic view of human nature, the privileged ontological status of the true self, and the value placed on the genuine happiness of human beings. But, the methods for reaching enlightenment and promoting happiness include both humanistic and normativistic elements. The humanistic aspect is the assumption that acting in accordance with the inner nature, letting compassion emerge from the deeper self within, will bring a person closer to this true self. The normativistic aspect is a strong emphasis on self-disciplined behavior and intense practise in controlling thoughts and emotions rather than uninhibited maximization of drives and positive affects. In fact, meditation techniques and yoga constitute revolts against the natural inclinations of the human body and mind. The goal is to use force to mold the self into a
state where the absolute truths are realized. Moreover, buddhists believe that there are certain fixed rules and principles of conduct, such as not craving material things, acting altruistically, and controlling thoughts and feelings, that a person must follow to get enlightened.

The buddhist claim that the human nature is characterized by compassion and self-transcendence is derived from the asserted evidence that human beings who live in accordance with this nature feel a profound sense of insight filled with happiness and serenity. Just like the existentialists, buddhists do however believe that it is hard to express their profound insight into the true nature of existence, and the concomitant illusions that human beings entertain, in human language, because such insight can ultimately only be rooted in personal experience. The difference is that buddhists believe that what is left, after dispelling all illusions, is an inherently meaningful world and a positive force that reaches through all living beings. Like humanistic psychologists, buddhists believe that there is a positive core within every human being that represents the true, or authentic, self and that human beings function optimally when this core is actualized. These two perspectives concur in acknowledging the existence of aggressiveness, violence, and atrocities, but they view these dark aspects of human behavior as results of malfunctioning, or at least non-optimal functioning, of human beings. But, there are two major differences in the view of human nature of these two perspectives. The first is that humanistic psychologists tend to believe that human beings have an inner drive to actualize the authentic self, which is often constrained by external factors, whereas buddhists believe that human beings must revolt against, and control, their natural inclinations to reach the true self. The second difference is that humanistic psychologists view the true self as imbued with unique potential, discovered or constructed, that an authentic person has an urge to fulfill, whereas most buddhist traditions assert that the deepest self consists of the same basic human nature, to be discovered and attained, for all human beings. Moreover, buddhist worldviews are difficult to classify according to Western conceptions of ontology, because they reject the dualism that comes with spiritualism, and they also reject materialism and idealism. Furthermore, their system of values and morality is built around the assumption that the purpose of life is happiness, in the sense of lack of suffering. Actions, and things in general, are viewed as derivatively right and valuable to the extent that they promote the happiness of sentient beings. In the mahāyāna schools of buddhism, the individual is trusted to develop a personal moral sense of what promotes happiness
and prevents suffering in different situations. In theravada buddhism, morality is much more based on fixed principles that are assumed to guarantee the promotion of happiness.

*Materialism, biologism and reductionism in science.* A source of contemporary normativistic ideologies is provided by views with roots within the ideals of the enlightenment and modernism that have thrived within science over the latest century. These views may be especially appealing as they are associated with the label *scientific*, which has become an epistemic honorific, although they have been fiercely questioned in recent years. I will attempt a mere sketch of different perspectives within science that I have chosen purposely for their normativism. These views do not necessarily accompany each other.

Whereas humanists may emphasize the pragmatic utility of science in improving the lives of human beings, normativists are likely to see science as the ultimate way of acquiring knowledge about the external world. For the normativist, the world exists independently of human beings, and it can be examined with careful empirical observation. Behind its superficial plurality is a fundamental order, a set of essences, which can be captured by reduction of the examined objects to entities postulated by the natural sciences (see Dupré, 1993). For example, some theoretical physicists of today strive to develop a grand *theory of everything*, trying to explain the whole universe in terms of entities such as superstrings (e.g. Hawking, 1988). Dissidents do however argue that different histories of scientific theorizing can lead to different models of reality that are equally valid.

Because the normativist sees scientific models as corresponding to reality, separating truth from falsity, notions pertaining to pragmatic utility are often eschewed in evaluating models. This leads to a normative philosophy of science, where there are correct methods, procedures, and criteria that must be followed, in order to avoid being led astray by situational factors. This is a form of *reliabilism*, that is, a popular form of rationalism that views knowledge as the result of using reliable methods. If the theory is based on *naïve realism*, that is, the assertion that comprehension of the external world is direct and accurate, then this knowledge is considered certain (Hartman, 1998; Naugle, 2004). Moreover, the notions of the metaphysical unity of the world, and methodological unity, have lead to a focus on mathematics as the perfect language that can capture the world. Accepting these tenets is a small step from endorsing a full-blown *naturalism or mechanism*, viewing the universe as a huge machine that is controlled by deterministic laws, devoid of purpose, and indifferent to human needs and desires. This means
that a human being is seen as one object among others that can be studied from the outside, using the methods of the natural sciences. A human being is reduced to the level of an animal, basically controlled by biological urges, to a number of mechanisms, or even to the level of elementary particles. From the perspective of evolutionary theory, it is easy to see human beings as selfish animals deep down, that struggle for survival, following moral principles only to ensure their own survival. In addition, Dawkins (1989) has urged for a new Copernican revolution in biology, removing the focus even further from human beings, by ascribing the forces of evolutionary selection to the genes. Dawkins claims that only a realistic scientific approach, that lets go of delusions of human supremacy and divine powers, can provide a lasting sense of meaning and purpose.

Contemporary normativism is also apparent in other sciences. In economics, abstract mathematical models, that incorporate the assumption that human beings are rational egoists, are sometimes used. In the social and behavioral sciences, many scientists place a high value on rigorous experimental control and manipulation to achieve a high degree of certainty of knowledge. Of course, today there are also strong humanistic trends in science. For example, some scholars appeal to the uncertainties of quantum physics and combine them with the sensitivity to initial conditions of chaos mathematics to launch an assault on determinism (e.g. Kane, 2003). Moreover, postmodernists have attacked scientists’ claims of having private access to the truth, which has led to a raging debate between modernists and postmodernists. Also, many philosophers and scientists advocate instrumentalist and pluralist views (Dupré, 1993; Chalmers, 1994). But, although normativism is not as dominant in science today as it was before, the normativistic view of science is deeply ingrained into the worldviews of many laypersons.

Finally, how are these normativistic views from science related to the five categories of belief? They include the view that reality is mind-independent and solely material, the doctrine of determinism, and a belief in the meaning of life only in so far as this meaning is to survive and reproduce. Related to this is an empiricism, or at least a belief in reliable methods, and realism about the truth. Human nature is portrayed with deterministic metaphors, as controlled by biological urges and irrational impulses, by laws of information processing, or by neurochemical reactions. This leads to a moral philosophy of control and discipline of the irrational elements of human nature. Truth and accuracy are valued in the scientific endeavor.
Sources of influence

Due to the encompassing nature of worldviews, the range of factors that may influence them is immense. Also, many of these factors are probably in heavy bidirectional interaction with worldviews and there may even be some conceptual overlap. For example, do humanists display more positive affect or does positive affect make people answer more humanistically? In the latter case, is there a real level of humanism veiled behind the humanism that is a result of affect induction or is humanism inextricably tied to mood? Researchers need to be wary of this in going into more detailed causal models. Another problem to consider is whether it is the beliefs per se or just the belief reports that are influenced an external factor, or if beliefs and belief reports are even always distinguishable. It is, as mentioned before, plausible that some beliefs are constructed online.

Mood effects

Over the last decades there has been a revival of interest in psychology in the interplay between cognition and emotion. This increased interest has primarily been focused on the role of cognition in emotion, that is, on theories that portray beliefs as antecedents of emotions. For example, according to Lazarus’ appraisal theory, emotions are the results of beliefs about the world and about events. The reverse direction of influence, that is, the effect that emotions have on beliefs, has received much less attention. Throughout Western intellectual history, emotions have often been viewed as mere sources of distortion to human thought that need to be controlled. Today, there is a recognition that emotions influence the content, strength, and resistance to change of people’s beliefs. They play a pivotal role in beliefs concerning things that are of special emotional importance and personal relevance, especially in making these beliefs persistent to change (Fridja, Manstead, & Bem, 2000).

Effects of emotional states on beliefs may be especially prevalent in the case of moods. In contrast to specific emotional reactions that direct attention to stimuli, moods tend to be more subtle, more enduring, less conscious, and less directed at a specific object. Consequently, the information that they provide may be misattributed to other substitute objects. For example, a sad person may attribute his sadness to the quality of his life. There is also another mechanism behind mood effects, namely that the prevailing mood primes cognitive representations that agree with the mood, so that they become cognitively available. Many studies have shown examples of
how people’s moods influence the way in which they perceive themselves and others, so that their perceptions and actions are congruent with their moods. In comparison to sad persons, happy persons react more positively to other persons, they linger on the positive characteristics of other persons, they remember more socially desirable characteristics, and they generally expect people to behave well. They are also more friendly and helpful, and they report higher life satisfaction, better health status, and more positive expectancies about the future. Happy persons also have an elevated sense of self-efficacy, confidence, and competence. In addition, people selectively expose themselves to things in a mood congruent manner, so that the present mood is prolonged. Happy persons spend more time in light-hearted and enjoyable social activities, whereas sad persons spend more time in somber and solitary activities that they perceive as serious and meaningful. The mood may be further strengthened through making people disposed toward accepting and learning information that agrees with their prevailing mood. In this way, a sad mood may create a vicious circle. Such vicious circles constitute a major part of depression (Bower & Forgas, 2000).

Furthermore, persons who are in a bad mood tend to use more elaborate and systematic strategies of cognitive processing, whereas happy persons tend to use quick and heuristic processing. This may be partly because a bad mood provides information that there is a problem to be dealt with, and partly because sad individuals want to distract themselves from the unpleasant mood. Happy persons, on the other hand, perceive everything as fine and in little need of careful evaluation, and they avoid activities that may change the pleasant mood. Because of this, happy persons tend to get persuaded more easily than sad persons. There is also some evidence that they rely more on stereotypes in making judgments (Kunda, 1999). A positive affective state may support the formation of new beliefs or the elaboration of existing ones, whereas negative affective states may encourage the individual to update beliefs in the light of new evidence (Fridja et al., 2000).

But, although these effects are ubiquitous they do not occur under any circumstances. Researchers know little about how far they reach, how deep they go, and under what conditions they occur. Because of this, Forgas (1995, in Bower & Forgas, 2000) has developed the Affect Infusion Model too attempt to specify the conditions under which it is probable that affect will infuse into cognition. According to this model, the processing strategy that a person uses decides whether affect infusion will occur. Open, constructive, and substantive processing will lead to
affect infusion. People usually try to adopt the easiest and simplest processing strategy to minimize their effort. But, there is a range of contextual factors that can motivate deeper processing. These factors include features of: (a) the information, such as complexity, familiarity, and typicality, (b) the person, such as affective state, cognitive capacity, motivation, personality, and personal relevance of the task, and (c) the situation, such as demand effects and expectations. If the task is familiar and there is little personal involvement and no other motivational, cognitive, affective, or situational forces that demand more elaborate processing, an individual is likely to search for a predetermined opinion. There will be no possibility for affect infusion. If there is a strong motivation to reach a specific judgment, affect infusion is also unlikely to occur. Affect infusion is more likely to occur when people use heuristic processing for a simple task with low personal relevance, no specific motivational objectives, and no demand for substantive processing and their cognitive capacity is limited. But, affect infusion is the most likely to occur when the task is complex, atypical, and personally relevant and the person has adequate processing capacity and lacks a specific motivational goal. On the whole, the more extensive and prolonged the cognitive processing is the more likely it is that affect will infuse into the judgments. The things that lead to motivated processing include personality characteristics such as social desirability, need for approval, self-esteem, and Machiavellianism (Bower & Forgas, 2000).

Epistemic motivation

Along with the increased appreciation of the influence of emotions on beliefs comes the notion that people sometimes believe things because they are motivated to do so. Motivational influences may arise as a result of specific situational influences, but they may also be the result of stable individual differences. Psychologists have interested themselves in concepts such as authoritarianism, intolerance of ambiguity, dogmatism, cognitive complexity, fear of invalidity, and social desirability to explain the character of people’s beliefs. Need for cognitive closure is a construct that has been elaborated in recent years (e.g. by Webster & Kruglanski, 1994) that incorporates aspects of the other constructs mentioned. Need for cognitive closure is a general cognitive-motivational orientation that is either open and exploratory or closed and immutable. It is defined as a motivated tendency to form any belief on a given topic in order to avoid the experience of confusion and ambiguity. Webster and Kruglanski (1994), describe need for
cognitive closure as a single multifaceted construct that is expressed in five different ways: (1) preference for order and structure, (2) emotional discomfort associated with ambiguity, (3) urgency of striving for closure in judgments and decision making, (4) desire for certain knowledge and predictability, and (5) close-mindedness, that is, an unwillingness to have one’s knowledge challenged. Regardless of whether it is a stable personality dimension or if it is evoked by a particular situation, need for cognitive closure has the same consequences: a tendency to seize on information that affords closure and to freeze on closure once it has been attained (Kruglanski, 1989). People high in need for closure are more prone to be influenced by stereotypes, correspondence bias, and primacy effects in impression formation, and they tend to reject other persons with deviant opinions. Furthermore, when a person is engaged in an unattractive and boring task or exposed to time pressure the need for closure is elevated (Webster & Kruglanski, 1994).

Need for cognition is another construct that pertains to differences in motivated information processing. It is a unidimensional construct, defined as a stable individual difference in people’s tendency to engage in, and enjoy, effortful thinking. In contrast to need for cognitive closure, this need is oriented toward a process rather than toward an outcome. Individuals that are high in need for cognition have active and exploring minds, and they are intellectually curious. They tend to seek detailed information about the world and to engage in effortful cognitive activity, and they are less stressed by problems, life circumstances, and tasks that are cognitively effortful. They actively seek information about the world and reflect on it to make sense of it. Persons that are low in need for cognition, on the other hand, tend to rely on celebrities and experts, cognitive heuristics, or social comparison to acquire beliefs and solve problems (Cacioppo, Petty, Feinstein, & Jarvis, 1996). There is a negative relationship between need for cognitive closure and need for cognition. A plausible explanation for this is that individuals that are high in need for cognitive closure will avoid effortful processing unless they have some special motivation to engage in it (Webster & Kruglanski, 1994).

Culture

There is a widespread consensus among worldview theorists that culture has a central role in molding the worldviews of individuals. Human beings form their personal worldviews in their contacts with other persons and worldviews that are embedded in culture. De st. Aubin (1996)
Worldview has stressed that personal ideology cannot be understood without taking into consideration that ideologies are socially embedded. In addition, Tomkins emphasized the importance of a good fit between the ideology and myths of society, the ideo-affective structures created through socialization, and the particular way of life in the society. If the fit is not good, people have to live with a sense of alienation and gradually adapt to the best-fitting ideology.

Culture is a very general term, and it can be used in many ways that vary in scope and content. One aspect of culture that is of special interest in this research area is the systems of norms, attitudes, values, and beliefs that are shared among individuals. Such systems of meaning are shared in for example families, education, historical periods, geographical regions, nations, ethnicities, political and religious orientations, traditions in science and philosophy, popular culture, and the media. Prior to adulthood, the worldviews are formed by such external influences, and the basic values and emotional structures become crystallized. With the advent of advanced cognitive abilities and the resolution of the identity crisis in adolescence and early adulthood, individuals acquire the ability to maintain their own personal worldview and integrate information into it. Thus, culture continues to exert an influence on the worldviews also after adolescence, although it is plausible that some basic structural aspects of the worldviews have been fixed (see Tomkins 1963, 1965; Rokeach, 1968; Cole & Cole, 2001).

De St. Aubin (1996) has offered an explanation of the general prevalence of humanistic answers over normativistic ones on the polarity scale in terms of a societal increase in the importance accorded to being politically correct. Research from Krus and Tellegen (1975) offers another explanation. According to them, the idea of a polarity in ideological attitudes is closely related to conceiving them as cyclic. The dominance of either pole is seen as a reaction to the preceding dominance of the opposite pole. Krus and Tellegen used Reich’s model of the development of North American culture through three different levels of consciousness. According to this model, the later generations are not as prejudiced and self-aggressive as the earlier generations. Krus and Tellegen found that normativism was highly associated with the earlier levels of consciousness, whereas humanism was associated with the most recent form of North American consciousness.

However, later research indicates that a switch from normativism to humanism may in fact reflect a general cultural change that is caused by economic growth. The World Values Survey, which is the largest investigation ever of attitudes, values, and beliefs around the world, covering
60 societies that represent almost 75 percent of the world’s population, has provided data that, in conjunction with Tomkins’ (1963, 1965) and Rokeach’s (1960) theorizing, indicate that economic growth engenders a change away from normativism and dogmatism and toward humanism and openness. An important cautionary note is however that this survey is focused on the contents of worldviews rather than on their structural aspects. Beliefs that express openness and tolerance can be held in dogmatic ways (Rokeach, 1960). Nevertheless, the theory that is put forth by Inglehart and Baker (2000) to account for the cultural changes does strongly suggest that these changes apply to the structure as well as contents of the worldviews.

The World Values Survey, which has been conducted in four waves over a total span of 20 years, has revealed what Inglehart and Baker (2000) call “one of the most dramatic cultural changes that has occurred since the dawn of recorded history”. Because of the industrialization and the concomitant economic growth, there are today entire generations of individuals that have grown up with a sense of security and a basic material standard of living taken for granted. When survival is uncertain, people tend to prioritize physical and economic security over all other goals. This leads to a valuation and protection of ingroups that are important for survival, such as family and nation, and a passive deference to the authority of these groups. Thus, in this survival mode, people tend to view foreigners, dissidents, ethnic diversity, cultural change, and deviations from social conformity as dangerous threats to their sustenance. To maximize predictability in an uncertain world, they need absolute norms and values that may be provided by authoritarian religion, science, and political systems, and they need strong and decisive leaders. At first, industrialization satisfied this need for predictability through the control of the environment that science and technology enabled. The world became technical, mechanical, rationalized, and bureaucratic. But subsequently, as peace, prosperity, and the emergence of the welfare state instilled a basic sense of security, the direction of this cultural evolution changed toward a focus on so called postmaterialist values. With such a sense of security, people can afford to prioritize cultural issues, such as environmental protection, even when these goals conflict with maximizing economic growth, they can focus more on the quality of their lives rather than mere survival, and they can look for, and discuss, alternatives to the prevailing ideologies. This sense of security creates a fertilizing ground for tolerance, trust, and the flourishing of democracy, rather than hierarchies and authoritarian systems, and it causes a steep increase in subjective well-being up to a basic economic standard. The postmaterialist values are centred around
communication and freedom to express the self. Cultural diversity, discussion, and deviations from social conformity are regarded as stimulating and interesting rather than threatening. This has created an unprecedented possibility for individuals to break out of traditional structures, such as gender roles. The increased sense of security in many countries has diminished the need for reassurance that religion traditionally provided, but it has not eliminated religiosity. Rather, religiosity has been directed away from adherence to traditional religions and toward personal spiritual explorations. People still crave answers to the most fundamental existential questions and often seek them in spirituality (Inglehart, 2000; Inglehart & Baker, 2000; see also Forman, 2004).

All countries in the World Values Survey, with the exception of those ex-Communist nations that collapsed economically and socially, have developed toward postmaterialism as described. This shows that economic growth does induce a predictable cultural change. But, it does not show that different cultures will be homogenized or that Western culture will be universalized. The wealth of available data from this survey demonstrates not only a general cultural change, but also an impressive persistence of values that are traditional in each country. Cultural factors add something to the explanation of the present value structures in different societies that cannot be explained by economic development, occupational structure, and the expansion of educational systems. The traditional culture of a society appears to influence subsequent cultural change. Thus, a society’s culture is shaped by its entire economic and historical heritage. Religious traditions have historically shaped the national culture of, and left a persistent imprint on, different societies, and their values are continuously transmitted through educational and cultural institutions (Inglehart & Baker, 2000).

The present research has been conducted in Sweden. The Swedish ethnologist Daun (1998) has tried to delineate some characterists of the specifically Swedish mentality. These characterists include independency, achievement, norm following, decency and honesty, lack of interpersonal orientation, preference for loneliness, politeness, and avoidance of interpersonal conflict and of public display of emotion. These characterists seem to reflect traditional values and normativism. But, the World Values Survey shows that Sweden has not only followed the general trend of cultural changes in value systems, but according to Inglehart and Baker (2000), Sweden, together with the other nordic countries and the Netherlands, seem to be at the cutting edge of cultural change. In comparison with other European countries, Sweden shows a low emphasis on classic
values such as good manners, hard work, religious faith, and obedience, and a very strong
emphasis on liberal values such as independence, tolerance, and determination. Sweden is the
highest of all countries on a number of indices of acceptance, tolerance, and solidarity. Especially
solidarity with immigrants is markedly higher in Sweden than in all other countries. One way of
analyzing the contribution of traditional culture to the present culture is to divide the world into
different cultural zones. According to one prominent conceptualization, originally outlined by
Huntington (see Inglehart & Baker, 2000), Sweden is a part of protestant Europe. Protestant
religion gave rise to the *Protestant Ethic*, that is, a value system that encouraged economic
accumulation as something laudable, as well as relatively high degrees of interpersonal trust and
social pluralism. The Protestant Ethic opened the way for capitalism, industrialization, and an
early economic development. Consequently, the Protestant countries have had time to gradually
incorporate the postmaterialist values that counteract the Protestant Ethic and to focus on, and
improve, the quality of their lives. Therefore, the Protestant Ethic is today fading away from

**Subjective well-being and related factors**

The construct of *subjective well-being* focuses on well-being either in a global sense or in
relation to specific life concerns. It is tightly intertwined with other constructs such as meaning in
life, depression, alienation, optimism, locus of control, and self-esteem. Research on constructs
that are closely related to subjective well-being suggests that worldview-aspects such as a sense
of optimism and meaningfulness, positive evaluations (e.g. of the self), and perhaps even
spirituality may form integral parts of psychological well-being (Andrews & Robinson, 2001;
Debats, 1996; Fontana, 2003). Conversely, Beck (as cited in Brody & Erlichman, 1998) has
conceptualized depression as a negative view of the world, the self, and the future.

Some researchers have even conceptualized subjective well-being in terms of beliefs
altogether, namely as beliefs about the discrepancy between personal aspirations and
achievements (Andrews & Robinson, 1991). But, as in the case of cognition and emotion in
general, the causality appears to be bidirectional, because it is also plausible that a high level of
subjective well-being engenders a disposition to view things in a positive light. The influence of
subjective well-being may be especially pervasive upon the evaluative aspects of the worldview.
Evaluative reactions of good or bad and desirable or undesirable are so essential to human
judgments that it has been suggested that positive versus negative reactions constitute a basic dimension by which the brain deals with information and that these evaluative reactions are a part of human nature. Immediate evaluative reactions are indeed ubiquitous and virtually inevitable. In addition, positive and negative attitudes predispose individuals to act in ways that are consistent with the attitude. Positive attitudes produce approach tendencies and negative attitudes produce avoidance tendencies (Ajzen, & Sexton, 1999).

The construct of subjective well-being can be split into one cognitive and one affective component. For example, research has shown that older persons often show lower levels of happiness (the affective component), but higher levels of life satisfaction (the cognitive component) at the same time. The affective component can be further subdivided into positive affect and negative affect. Research has shown that positive and negative affect are virtually independent of each other in some measures, that is, they can coexist. Many different measures have been developed to measure subjective well-being. They differ in the extent to which they focus on these different dimensions. Measures of happiness tend to capture mainly positive affect. Measures of depression, worrying, and anxiety reflect mainly negative affect. Satisfaction measures primarily reflect the cognitive component. Subjective well-being measures in general tend to be unrelated to demographic variables, although there are exceptions such as being married, receiving social support, and experiencing increases in income. Subjective well-being is much more related to personality variables such as extraversion, interest in other persons, active social involvement, optimism, and self-esteem. Neuroticism tends to be related only to the negative affect component (Andrews & Robinson, 1991).

The deeper sense of happiness that spiritualists sometimes claim is the result of spiritual growth is primarily related to the cognitive component of subjective well-being. The desired state is a stable sense of inner harmony and peace, characterized by controlled and moderate emotion, rather than a more superficial and sensuous happiness that is characterized by volatile euphoria and passion (Fontana, 2003; Eliade, 1969; Revel & Ricard, 1999).

There are also other important aspects of well-being that are not covered directly by measures of subjective well-being. For example, self-esteem can be said to measure another component of well-being, namely the evaluative aspect of the self-concept. Self-esteem is thought to arise as a result of a discrepancy between the actual and the ideal self. Research has shown that people can exhibit a form of high self-esteem that is not genuinely high, but rather it is a form of protection.
from things that may threaten the self, such as failure and social rejection (Blascovich and Tomaka, 1991). This illustrates the importance of authenticity in well-being. Related to the existentialistic view is another aspect of well-being that targeted by constructs such as normlessness, meaninglessness, alienation, anomie, self-estrangement, and loneliness (Seeman, 1991). To capture a broad variety of aspects of well-being, Ryff and Keyes (1995) have argued for a multidimensional model of well-being with six dimensions: (1) self-acceptance, (2) relations with others, (3) autonomy, (4) environmental mastery, (5) purpose in life, and (6) personal growth.

**Authenticity**

When the influence of subjective well-being upon the worldview is considered, it is important to take the interaction with authenticity into consideration. Authenticity is especially relevant to research on worldviews because it affects both the formation of beliefs and the acceptance of beliefs that are already entrenched in the worldview. It is plausible that some of the contents of an adult worldview is more of an expression of personality in an authentic person and more of an expression of cultural influences in an inauthentic person. For example, authenticity should moderate the extent to which personal ideologies are adopted as a result of ideo-affective resonance. To be authentic means roughly to be in touch with and accept your true, or intrinsic, nature, and to be aware of your true thoughts and feelings and the ways in which these may be biased. This awareness is, as the existentialists stress, ideally manifested as a source of behavior and belief formation. The concept of authenticity has a central position in psychological theories that are inspired by existentialism. In Maslow’s (1968) need hierarchy, authenticity is a higher order need for psychological growth, and in Rogers’ (1961) terminology, authenticity corresponds to congruence between the representation of the self and the actual experience. If the parents regulate their love and acceptance so that it is conditional on achievement, this congruence will be replaced by a rigid and defensive self-concept that assimilates only what is acceptable according to external standards (Goldman & Kernis, 2001). In self-determination theory, being authentic means to self-regulate so as to satisfy basic psychological needs for competence, self-determination, and relatedness, as opposed to self-regulating so as to meet other people’s expectations and demands.
The concept of authenticity has commonly been considered too vague for serious empirical investigation. But recently, Goldman and Kernis (2001, 2002) made an effort to define authenticity in more precise terms, and they created a questionnaire to measure it. They defined authenticity, in a broad sense, as the unobstructed operation of one’s true or core self in one’s daily enterprise. They elaborated this definition by distinguishing between four different components. The first component is an awareness of, and a trust in, the personal motives, feelings, desires, and self-relevant cognitions. This includes to be aware of, and to accept, one’s multifaceted self-concept and its potentially contradictory self-aspects and their roles in behavior. The second component is an unbiased processing of information that is relevant to one’s positive and negative self-aspects, attributes, and potentials as opposed to denial, distortion, or exaggeration of these. The third component is a free expression of personal feelings and motives. This means that a person acts in accord with personal values, preferences, and needs, rather than to please others or to attain rewards and avoid punishments. The fourth component is to value and achieve openness and trustfulness in close relationships by disclosing the true self, with both its good and bad aspects. Goldman and Kernis named these dimensions awareness, unbiased processing, action, and relational authenticity. Although they are distinguishable, these components are in reality intricately intertwined, because people may experiment with roles, or their values and needs may clash with those of society, and this may still express authenticity.

In one study, Goldman and Kernis (2002) investigated the relationships between these four dimensions and four measures of well-being, namely life satisfaction, frequency of experiencing negative emotions, general self-esteem, and a fragile form of self-esteem that is dependent on the achievement of specific outcomes or evaluations. The sum of the dimensions of authenticity correlated positively with life satisfaction and self-esteem and negatively with negative affect and contingent self-esteem. Life satisfaction correlated positively with awareness, unbiased processing and relational authenticity. Negative affect correlated negatively with awareness and relational authenticity. General self-esteem correlated positively with awareness and action, and contingent self-esteem correlated positively only with action. Other research has shown that authenticity is indeed related to psychological health, well-being, interpersonal functioning, and optimal self-esteem, that is, non-defensive, non-contingent, and stable self-esteem. Moreover, authenticity correlates positively with all of Ryff’s subscales of psychological well-being and with the secure attachment style and negatively with depression and with the fearful and
preoccupied attachment styles. In addition, authentic persons rate their personal strivings as reflecting their true self, they experience autonomy in goal initiation, and they experience their goals as meaningful and consistent with their values. They participate in projects that make them feel competent and autonomous, which contributes to the sense of self-worth. Authenticity in strivings has been related to well-being not only at a given point in time, but also to increases in well-being during the pursuit of the goal (Goldman & Kernis, 2001).

Another testament of the importance of authenticity comes from research on optimism, particularly illusive or unrealistic optimism. People often have a distorted perception of the events of their lives, because they tend to view these events in a disproportionately pleasant light without being responsive to the demands and adversities in life. This distortion of reality has negative effects on adaptation. The unrealistic expectations provide a false sense of security that makes a person less capable of accurately appraising harmful situations and taking preventive measures. They may also lead people to pursue unrealistic ambitions with inappropriate persistence, which often leads to disappointment in the end. However, the idea that accuracy in knowledge sometimes must be sacrificed for well-being is still embraced by many psychologists. Taylor and Armor (1996, as cited in Leung, Steinfort & Vroon, 2003) have distinguished between optimism as an illusion, which is a set of healthy responses to trying situations, and optimism as a delusion, which is a set of unhealthy cognitive distortions. They maintain that illusive optimism is self-reinforcing and rewarding in lowering anxiety and contributing to the individual’s sense of mastery and control. But, recent findings point to the vulnerability of such illusive optimism to traumatic experiences. According to Janoff-Bulman’s (1992) theory, persons who suffer from traumatic events struggle not only with pain and loss, but also with rebuilding a worldview that was torn apart by the trauma. The shattering of the worldview is catastrophic to an individual. Not only does it destroy the sense of security and stability in the world, but it also threatens the sense of identity conferred by the worldview. After the terrorist attacks on September 11, 2001, Wong (2001, as cited in Leung, Steinfort & Vroon, 2003) claimed that only a more authentic and mature type of optimism, called tragic optimism, can survive and make a person feel hope even in such tragic and hopeless situations. Tragic optimism was originally outlined by Frankl. It incorporates an acceptance, rather than rationalization and denial, of the dark aspects of reality. But, the crucial point is to avoid letting this turn into pessimism. The dignity of human life and the existence of meaning in all situations should be affirmed with
courage, hope, and a heroic attitude. Frankl emphasized that, no matter how excruciating the circumstances, human beings can never lose their attitudinal freedom.

Wong elaborated Frankl’s thoughts and created a five-dimensional model of tragic optimism: (1) an acceptance of suffering and evil as inevitable parts of life, a willingness to face reality as it is, and an acceptance of one’s limitations, weaknesses, and all the misfortunes that have come one’s way, (2) an affirmation of the meaning and value of life, (3) a courage to overcome adversity and to face an uncertain future, (4) a faith in a higher power, (5) an ability to transcend one’s self-interest, and to rise above situational constraints and other limiting factors, in order to contribute to humanity and make a difference in the world. The first dimension represents realistic pessimism, or acceptance of reality, and the four remaining dimensions represent a form of heroic optimism. The results of factor analyses conform to this theoretical structure (Leung, Steinfert & Vroon, 2003).

Purpose and methodological rationale

*Questionnaires and Q-methodology*

The traditional *questionnaire* is the most widely used instrument in psychological research. Questionnaires are usually composed of a number of questions that the research participants are asked to score on a quantitative scale. These scores are summed to create a total score, which is motivated by the fact that people’s answers to certain items tend to covary. Although the items may measure unique parts of the same hypothesized construct, they generally have to overlap to be included in the same scale, that is, the scale must be adequately internally consistent. Psychologists are typically interested in the covariation among items or clusters of items, rather than covariation among the persons who answer the questionnaires. This has some peculiar consequences. For example, two persons may, although it is extremely unlikely, answer the exact opposite to all items in a questionnaire and still receive the same total score and thus be categorized in the same category. In addition, questionnaires do not take into account that the items can be of very different relevance to a person and that different theoretical constructs can be of different relevance in describing different persons.

*Q-methodology*. Proponents of *Q-methodology* have criticized the questionnaires that are prevalent in the social sciences for lumping individuals into categories that are defined from the outside rather than from the individuals themselves (Brown, 1996). Stephenson (as cited in
Brown, 1996) originally developed Q-methodology, almost 70 years ago, as a response to some of the deficiencies inherent in questionnaires. Stephenson wanted to move the focus from abstract variables to how individuals actually think and react to the materials placed in front of them. The similarity between this and Tomkins’ idea on ideo-affective resonance is striking. The actual procedure that Stephenson devised consists in sorting items into a fixed number of categories along a continuum, which ranges from, for example, least agree to most agree. Because they evoke the strongest reactions, items that are placed at the endpoints are likely to be the most meaningful and relevant items for the person who placed them there. This means that the items are not completely defined a priori, but they are partly defined by their localization on the Q-sort continuum in relation to the other items. In this way, Stephenson claimed that the answers are self-referential, that is, related to the person’s internal frame of reference, rather than to some external frame of reference. Consequently, a Q-sort is a creation, a so called Q-universe, and the participant participates in defining the items.

Stainton Rogers and Stainton Rogers’ (1990) distinction between Q-methodological and R-methodological uses of Q-technique relies on the fact that some researchers still use Q-technique to try to categorize individuals into predefined categories, instead of letting the categories emerge from the Q-sorts. This is an R-methodological use of Q-technique. In Q-methodology, the items are evaluated in relation to each other and not on some absolute scale. A Q-sort is an integrated whole. The parts cannot be understood without recognizing how they fit into the whole, and the whole cannot be understood without understanding how the parts interact. However, Q-technique has been used in a number of different ways, some of which diverge from the principles of Q-methodology. Stainton Rogers and Stainton Rogers (1990) criticized the assumption that Q-sorts are self-referential creations that communicate subjective viewpoints. They adopted a social constructionist stance, using Q-technique to investigate socially constructed understandings, instead of focusing on the person that communicates them. Because this approach is oriented toward the common understandings and not toward the individual, more persons are needed to generate them rather than more items, and more factors need to be extracted to account for the diversity of understandings.

Advantages of Q-technique. It is likely that Stephenson went too far in claiming that Q-methodology enables the researchers to set aside all frames of reference that are external to the person in imbuing the items with meaning. For a researcher to be able to interpret the Q-sorts in
any meaningful way at all it seems inevitable that some form of external reference for different potential meanings of the items is needed. But still Q-technique allows that many different beliefs can be expressed through the same item.

Apart from this, Q-technique has some pure methodological benefits. It is a flexible approach that can treat items that are sampled both from naturalistic discourse and from structured sampling techniques. Moreover, the two endpoints of the continuum can be chosen in a multitude of ways. The response format of a continuum of relevance is also one of the strengths of Q-technique, but it is controversial whether or not respondents should be forced to sort a predetermined number of items into each category. In the case of a forced format, the researcher decides the number of items to be contained in each category, usually with the aid of a quasi-normal distribution, so that categories at the extremes contain fewer items. Although this approach may be more methodologically rigorous, it will put constraints on what a person can express through a Q-sort. McKeown and Thomas (1989) have claimed that using a free format neither undermines the reliability of the technique nor the quality of the data. But this format may still make the answers of different persons less comparable, because it allows for more intrusion of response effects, such as differences in acquiescence or ego involvement. On the other hand, an advantage of using the free format is that the middle category will be psychologically neutral (McKeown, 1990). When a forced response format is used, the researcher can never know for sure where the psychologically neutral point is, that is, which items are de facto agreed and which are de facto disagreed. This means that the items placed in the middle categories become less interpretable. Furthermore, the Q-sort response format has been criticized for demanding persons to make too many fine tuned distinctions among items. This may go beyond their cognitive capacity so that some of the sorting becomes arbitrary (McKeown & Thomas, 1989).

Nevertheless, the biggest advantage of Q-technique is the wealth of information it will provide about the view expressed by a person. A Q-sample contains an incredibly large number of possible organizations of items that can be extracted from it. The data are analyzed quantitatively using a Q-factor analysis, which renders factors that persons load on. Researchers may refrain from imposing their preconceived ideas on the data by using a standardized procedure, or they may let their hunches guide them in order to find the most meaningful factorization. After deciding how to factor the data, the researcher must decide what persons define each factor and merge their answers into a weighed mean of their different views. Finally, researchers will make
qualitative interpretations of the emerging gestalts in order to try to capture the essences of the different factors.

*Associating persons with factors.* The problem with Q-technique is to decide exactly how persons are to be associated with factors. The conventionally recommended procedure (e.g. by McKeown & Thomas, 1989) is to designate only those Q-sorts that load significantly on a sole factor as defining variates. Persons that load highly on *only* one specific factor can be said to be *typical* of this factor. The conventional method is to simply define those persons that are typical of a factor as members of the same group and the others as non-members. There are two problems with this approach. First, the division between membership and non-membership is arbitrary, unless the researcher has used some rationale to choose groups that are qualitatively distinct in a meaningful way. And even in the latter case, the extension of the group is almost always vague, that is, some people will be hard to categorize. Second, this classification does not take into account if a person is very similar to a factor unless the person is also typical of it. This means that a person who is both very neurotic and extraverted would not be classified as either of them. This means that a lot of information is lost.

Another approach is to view the factor as a prototype and to use a person’s correlation with the factor as a measure of the person’s *similarity* to it. Hence, a very neurotic and extraverted person would be classified as very neurotic and very extraverted. Using continuous values of similarity avoids obscuring the results with an arbitrary categorization. It also accommodates the fact that negative factor loadings may occur, which is hard to explain by using typicality membership. However, the problem with this approach is to deal with the problem of compositionality, that is, a person who is both very neurotic and very extraverted may have characteristics that qualitatively differ from both the prototypes. A continuous classification may contain many qualitative leaps, depending on what quality you are interested in, that may be hidden under the similarity values. In fact, seeing a Q-sort holistically means that every little quantitative change will create a qualitative difference. But, by using a typicality classification you still have to find the most important qualitative leaps to avoid this problem. Research on attachment has demonstrated that it is hard to categorize people into four exclusive categories of attachment styles. But, on the other hand, the uses of similarity and typicality tend to produce very similar results in the case of attachment (Bartholomew & Horowitz, 1991).
Application of Q-methodology to the present research. Although it is not widely used in mainstream psychology, I believe that Q-methodology confers certain advantages over questionnaires, which makes it ideal to use in the present research. First and foremost, the wealth of information provided from the participants' own viewpoint, in conjunction with letting the categories emerge from the data, is advantageous, because clear theoretical rationales for a priori categorizations are scarce in this area. A second advantage is that a Q-sort models the organization of a worldview, that is, as a gestalt or organized whole. Worldview gestalts will emerge from the data, in an a posteriori fashion, with reliability assessed on the level of the worldview, rather than as a set of disparate dimensions that are a priori specified. The contents of the worldviews may be understood better by taking their structures into account. A third reason for using Q-methodology is that some vagueness or ambiguity in the items, which leads to different interpretations of them, may be an asset rather than a threat. Though it may make the qualitative interpretation of the factors more arduous, it also liberates the items from the external reference and opens them up for being defined in different ways from the participants' internal frames of reference. The immensity of the number of Q-universes that can be constructed from the items makes it very unlikely that two persons who cluster together in the analysis have not interpreted the items in a similar way. If the factor is reliable and the Q-sorts are similar then it is very likely that individuals who end up in the same statistical clusters have worldviews that are similar in the respects designated by the Q-sample.

Although Q-methodology offers possibilities that questionnaires do not, such as investigating which persons cluster together and what items best discriminate the worldviews of different persons, I believe that discounting questionnaires altogether is going too far. Some Q-methodologists claim that the use of questionnaires entails postulating abstract essences that exist within each person in different amounts (e.g. McKeown, 1990). I contend that use of questionnaires does not entail any such ontological commitment. Questionnaires may also be said to investigate operant subjectivity, that is, subjectivity as it is manifested in behavior. Although a questionnaire may be more top-down oriented, and in that sense less precise, when it comes to human subjectivity, this does not necessarily mean that the object of research is different. In addition, questionnaires have advantages over Q-methodology when it comes to investigation of relationships among different types of phenomena that have a relatively fixed meaning, especially with advanced statistical methods such as structural equation modeling.
Purpose and hypotheses

The overarching purpose of this study was to investigate the worldviews of a group of human beings. The implementation of this purpose was twofold. The first part was confirmatory and the second part was exploratory.

The purpose of the first part of the study was to examine de St. Aubin’s likert version of the polarity scale, in order to see if the factor structure conforms to the hypothesized two-factor model, with two orthogonal factors, or if other models describe the data better.

The purpose of the second part of the study was to take a broader perspective, transcending the scope of Tomkins’ theory, by investigating worldviews in a more exploratory fashion. In order to compose a Q-sample that would form the basis of a Q-methodological investigation, I derived statements from all of the five domains of the taxonomy of beliefs. In addition, I examined correlations between the worldview, as assessed with Q-methodology, and factors that plausibly may influence the worldview. I devised a schematic model as a guide for the exploratory data analyses. Note that this model was created as guidance in choosing data analyses rather than as a description of assumptions about causality.

Figure 1. Sketch for the data analyses.

I used questionnaires to assess demographical variables, political and religious orientation, and how significant each participant thought that each part was in describing his or her own
worldview or personality. Self-description was, like the worldview, assessed with Q-methodology, but the Q-sample contained items that are related to well-being, authenticity, and epistemic motivation. I measured personal ideology with de St. Aubin’s modified polarity scale, but also with another questionnaire that I constructed to allow for the possibility of alternative expressions of humanism and normativism. I outlined alternative ideologies that persons who have humanistic and normativistic ideo-affective postures should experience resonance with, although I tried to make these alternative ideologies more sophisticated and more in line with contemporary thought than the original forms of humanism and normativism.

I also wanted to see if affect infusion would affect the amount of humanism and normativism on the MPS. To do this I measured the participants’ moods, without any affect induction, and variables that may affect the probability of affect infusion. The variables I included were how relevant and familiar the participants thought that the questions were, and what time they spent completing the questionnaire. I sketched four possibilities by combining positive affect, negative affect, humanism, and normativism.

Method

Sample

Factor and item analysis of the MPS. For the analysis of the MPS, samples from five different studies, all conducted at the institution of Psychology at Lund University between 1998 and 2003, were used. These samples composed an aggregate sample of 315 persons. Available data for age and sex gave a mean age of 25.9 years, with a standard deviation of 8.62 (N=193), and 143 out of 253 (56.5%) participants were female and 110 were male (43.5%). Factor comparison was not considered necessary, because the sampling circumstances were similar enough for me to be able to define all persons as one sample. When a participant’s data were missing for not more than one or two items on the MPS, I calculated humanism and normativism scores as a weighed mean of the items that were intact.

The Q-methodological part. A total of 80 persons, sampled by convenience mainly at Lund University, participated in the present study. 30 of the participants were male (37.5%) and 50 were female (62.5%). The average age of the participants was 23.0 years with a standard deviation of 3.57. The average age for men was 22.4 years with a standard deviation of 2.11. The average age for women was 23.3 years with a standard deviation of 4.3. Nearly all of the
participants (75 out of 80) were university students and on average they had studied 3.5 semesters full time. Most of them had an educational background of studying mainly within the field of social sciences (64 participants), especially within the behavioral sciences (46 participants), and just a few of them had taken classes within the natural sciences (16 participants).

I recruited the participants via bulletin boards at the institution of theology, the institution of philosophy, the library of behavioral sciences, from other places where students walk by, and from courses within the behavioral sciences. In addition, 12 of the participants were recruited from my own circle of acquaintances. I informed the participants that the topic under investigation was beliefs concerning the world, the self, and life in general, and that participation was completely anonymous. I also told them that they would get a chance to learn about the results of the research and that a number of cinema tickets would be distributed among the participants by drawing of lots.

Q-sort data were missing for one person for the first Q-sort and for another person for the second Q-sort due to computer failure. Data for the PIQ were incomplete for one participant. These persons were excluded from the analyses that involved this data. When data were missing for one or two items for a person on the MPS, humanism and normativism scores were calculated as a weighed mean of the items that were intact. For two participants, data were missing for a substantial number of items. They were excluded from all analyses that involved the MPS.

Material

For this study I constructed two Q-samples and four questionnaires. The only conventional measure that I used was de St. Aubin’s modified version of Tomkins’ polarity scale, translated into Swedish.

The Modified Polarity Scale (MPS). Tomkins’ (1965) originally constructed the polarity scale as a set of 59 paired statements. Each pair included one humanistic and one normativistic statement. Respondents were asked to endorse all statements with which they agreed, regardless of whether they agreed with both or neither of the statements in an item-pair. Stone and Schaffner (1988) conducted an item analysis of this scale. This rendered a revision of the scale into a 40-item measure with high correlations between items and latent variables and acceptable internal consistency (Cronbach’s alpha = .78 for the humanism scale and Cronbach’s alpha = .79 for the normativism scale). De St. Aubin (1996) transformed this scale by splitting the item-pairs into
separate items, rendering an 80-item questionnaire with a 5-point likert scale (see Appendix B). I used de St. Aubin’s Modified Polarity Scale in the present research. This scale has previously not been widely used in research and it has not been thoroughly validated. Reliabilities reported in de St. Aubin’s original study are somewhat low (split half reliability of .66 for the humanism scale and .63 for the normativism scale). However, the scale has been translated into Swedish and it has been used in four Swedish studies, acquiring considerably higher reliability coefficients (Cronbach’s alpha ranging from .75 to .86 for the humanism scale and from .84 to .88 for the normativism scale). In the present study, I supplemented the MPS with 6 items because some of the items in the Swedish scale are inaccurately translated. These items were chosen not only based on accuracy of translation, but also by considering if it was plausible that the modifications would make a difference. These items were placed in the end of the scale to keep the MPS intact. Because de St. Aubin, in the appendix of his article from 1996, by mistake set the scoring bar in the opposite direction of the standard, with low values for agreement and high values for disagreement, some researchers have used the standard scoring bar and some have used the reversed variant. Therefore I gave half of the participants in this study the standard bar and I gave half of them the reversed bar in order to see if it would have any effect.

The Personal Ideologies Questionnaire (PIQ). According to Tomkins’ polarity theory, the score on the polarity scale is merely one possible expression of the underlying ideo-affective postures. People with humanistic and normativistic ideo-affective postures might be attracted to (experience ideo-affective resonance with) other ideologies, and which ideologies they adopt depends on what ideologies are available in their surroundings. The classical forms of humanism and normativism, operationalized in the polarity scale, may be perceived as crude and naïve, particularly by well-educated people.

In this questionnaire (see Appendix C), I attempted to formulate alternative coherent perspectives that will appeal to persons with the corresponding ideo-affective postures. I summarized four different perspectives, with the first two depicting classical humanism and normativism, and the last two depicting alternative ideologies that I believed would share the core characteristics of humanism and normativism. With the first two descriptions, I tried to target the essence of classical humanism and normativism, as manifested in both descriptive and prescriptive statements. These statements include how people are, how they should be treated, how life should be lived, and what things are valued in life.
The third description was an attempt to describe an alternative normativistic ideology drawing on ideas from Darwinism, biologism and moral contractualism, which are often interwoven. The basic tenet of this ideology is that you should admit that human beings deep down are aggressive and egoistic animals and that their behavior is basically controlled by biological needs stemming from the drive to survive and reproduce. According to this view, man is an animal living in groups, where some of the individuals have greater evolutionary fitness and acquire higher status within the hierarchies that naturally emerge. The conflicts and destructive behavior that this leads to is considered to be a natural part of life. Furthermore, moral behavior is thought to arise from the awareness that if morals, norms, and laws are obeyed it is to the benefit of everyone, rather than from genuine compassion.

In the fourth description I synthesized ideas from humanistic psychology, existentialism, and Buddhism, which have much in common, to describe an alternative humanistic ideology. According to this perspective, all human beings are driven towards actualizing their inner potential and becoming compassionate and happy persons, rather than merely striving for survival and reproduction. It is recognized that aggressive and evil behavior and even atrocities frequently occur. But, this is assumed to occur only when people are not functioning fully as their needs connected to striving for self fulfilment are frustrated. Emphasis is placed on the fact that, unlike most animals, human beings are aware of their own existence and can take responsibility for their acts and their character. How much love and respect you receive from others is not considered as crucial as taking responsibility for yourself by being compassionate, loving, and accepting of others and of the self.

To test how people react to and judge these four descriptions, I conducted an informal pretest by posting the questionnaire on a forum on the Internet. Around a dozen of people commented on and answered the questionnaire. Some of them commented that the four different descriptions are too wide and generalized to account for their own worldview. I did not consider this to be a serious problem, because the purpose was to see how much people would agree with an entire perspective, which is exactly what the idea of ideo-affective resonance deals with. I also wanted to see if the questionnaire would show systematic relations to the other tests. However, I had to remove two assumptions that seemed to make the alternative positions appear less homogenous. Originally, the alternative normativistic position contained the assumption that there is an inherent order in nature, which can be described by scientific methods without appealing to non-
material phenomena. The alternative humanistic ideology contained a corresponding assumption, namely that the important thing is not what different particles human beings are made of, and what mechanisms that underlie their behavior, but rather to put individuals’ experiences into focus regardless of what kind of worldview they represent.

I assessed the participants’ judgements of each description with a likert scale, ranging from 1 (disagree completely) to 7 (agree completely), and also with an item that forced them to choose the one description with which they agreed the most. This questionnaire format has previously been used successfully in research on attachment, with descriptions of different attachment styles as items (Bartholomew & Horowitz, 1991).

Q-samples. I started by gathering a large number of items (over 1000) from lots of different sources, including measures used in the mentioned research and philosophical theories and doctrines. I chose items from the five domains of belief specified earlier, including items that represent beliefs about both abstract and concrete aspects of the world and items that target the self and the personal life. I then gradually reduced this wealth of items by eliminating redundancies. Moreover, I tried to detect similarities between different sets of items in order to see what kind of items that psychologists judge to be central. I tried to find the best ways of phrasing the items, so that answers to them would convey as much information at possible. Because of the assumed tolerance for, and even possible benefit of, vagueness in Q-methodology, I sometimes sacrificed clarity to obtain a greater information value in an item. At first, I included all of the remaining items in one extensive Q-sample in order to let the categories emerge from the participants’ answers as much as possible. But, after initial tries at Q-sorting the entire set of items, I concluded that the items had to be split into two samples in order to make Q-sorting possible: (1) items that describe beliefs about the world in general, and (2) items that describe the self and the personal life. The first sample contained 59 items and the second contained 36 items (see Appendix A). Although responses to the second sample or items is technically also an expression of the worldview, this sample was designed to target beliefs that pertain to the factors that I have claimed affect worldview beliefs. Consequently, responses to the second set of items may be regarded either as an expression of the worldview or as an indirect measurement of factors that may influence either just the responses to the first sample or also the beliefs that these answers express. The second sample included items about well-being in general and also items
about feelings of purpose and meaning, authenticity, and positive relationships, as well as epistemic motivation.

Demographical questions. The demographical variables included sex, age, educational background, family background, the parents’ parenting style, cultural background, political orientation, and religious orientation. These variables were assessed with a questionnaire with questions of both an open-ended and a closed format. I coded the answers to the open-ended questions into a limited number of dichotomous variables in order to keep the number of predictors down and to obtain large enough groups for meaningful statistical analysis. Education corresponding to college level in Sweden was categorized as social sciences program, natural sciences program, or humanistic program, with between 8 and 32 members in each group. University level education was reduced to courses or programs within social sciences (economics, law, behavioral sciences etc.), natural sciences (physics, chemistry, math, computer sciences etc.), humanistic subjects (philosophy, theology, cultural sciences etc.), behavioral sciences, and psychology. Some overlap between these variables did occur. I measured participants overall experience of university education as the number of points (Swedish credits) taken. I also assessed occupation, but because most of the participants were students I excluded this variable. Next, I included questions about family background. Whether the participants had been brought up in a complete family, with a mother, a father, and siblings, was coded as a dichotomous variable. The parents’ parenting style was assessed with a brief likert scale, ranging from 1 (disagree completely) to 5 (agree completely), with 5 items, asking how loving, emphatic, firm, punitive, and laissez-faire the parents had been. Loving and emphatic were chosen to represent warmth, as they correlated .806 and .919 (p=.000 and N=77) with this index. Laissez-faire, firm, and punitive were chosen to represent control as they correlated -.681, .802 and .762 (p=.000 and N=77) with this index. All items correlated in the opposite direction with the scale they were not classified into, but these correlations were markedly lower (between .211 and -.361). Furthermore, I inquired into the cultural background of the participants with an open-ended question and coded it as Swedish or non-Swedish. For political orientation, I included a forced choice between three alternatives: (1) articulate political orientation, (2) disinterested in politics, or (3) uncertain of political orientation. I also included an open-ended question to let participants describe their own ideologies. This yielded five dichotomous variables: left, right or middle, socialism, and liberalism, and articulation of any position at all. I included a similar forced choice
between three alternatives of religious orientation: (1) articulate religious orientation, (2) not believing, or (3) believing, but not in a specific religion. The participants were also allowed to describe their own orientation in an open-ended question, which resulted in the variable Christian or non-Christian.

Affect infusion questions. I designed this questionnaire (see Appendix D) to assess the participants’ present mood, how familiar they were with the statements on the MPS, and how important and relevant they perceived these statements to be. The first part contained four items for relevancy (nr 1, 5, 7 and 8) and four items for familiarity (nr 2, 3, 4 and 6), with one reversed statement on each scale (nr 5 and 6). Responses were assessed with a likert scale ranging from 1 (disagree completely) to 5 (agree completely). Items number 1, 7, and 8 correlated between .840 and .891 with the relevancy scale and item number 5 correlated -.879 with it (p=.000 and N=78), and their correlations with the familiarity scale were markedly weaker. Item nr 2 correlated markedly higher with relevancy than with familiarity and was therefore excluded from the familiarity scale. The resulting 3-item scale correlated .901, .853, and -.832 (p=.000 and N=78) with items number 3, 4, and 6. Correlations between each of the seven items that was used to compute relevancy and familiarity and the subscale that the item was not classified into ranged from -.229 to .395. Relevancy and familiarity correlated, r=.316, p=.005 (N=78) with each other. Cronbach’s alpha was .89 for relevancy and .83 for familiarity.

In the second part of this questionnaire, I listed 24 different affects along with an instruction for the participants to indicate how much their present mood was characterised by these affects. Responses were assessed with likert scales ranging from 1 (do not feel it at all) to 5 (feel it strongly). I drew 10 positive affects and 8 negative affects, that could be translated into Swedish, from Tellegen’s (1982) scales for positive and negative mood and supplemented this with affects that are especially relevant to Tomkins’ theory, namely happiness, sadness, contempt, disgust, surprise, and anger. For an index of positive affect, I used Tellegen’s 10 positive affects plus happiness. For an index of negative affect, I used the 8 negative affects from Tellegen’s scale plus sadness, contempt, disgust, and anger. However, one of the negative affects correlated markedly lower with the total scale than the others and was therefore removed. The positive affects (items nr 1, 5, 6, 7, 10, 12, 14, 17, 19, 22, and 24) correlated between .572 and .758 (p=.000 and N=77) with positive affect and between -.015 and -.451 with negative affect. The negative affects (items nr 3, 4, 9, 11, 13, 15, 16, 18, 20, 21, and 23) correlated between .707 and
.857 ($p=.000 \text{ and } N=77$) with negative affect and between -.087 and -.425 with positive affect. Positive and negative affect correlated, $r=-.330$, $p=.003 \text{ (N=77)}$ with each other. Cronbach’s alpha was .87 for positive affect and .93 for negative affect. Humanistic and normativistic affects were also summed into two different scales. But, both of these correlated very strongly with negative affect, and humanistic affect had no internal reliability as it included both positive and negative affects. Therefore, these two scales were dropped.

**Evaluation questions.** The purpose of these questions was both to let participants voice their opinions and criticisms and to generate valuable comments on the contents of the study. I first included questions about whether the participants thought the first Q-sort, the second Q-sort, the MPS, the PIQ, and the study as a whole had something important to say about their view of the world, life, and the self. This was assessed with a likert scale ranging from 1 (nothing was important) to 5 (everything was important). These five items were aggregated into a personal significance index. The items correlated between .783 and .882 ($p=.000 \text{ and } N=68$) with the total scale and Cronbach’s alpha was .87. After this part, I included some open-ended questions to let the participants motivate their personal significance ratings, comment on whether any particular area of belief was under- or overrepresented in the study at large, and give voice to additional criticisms and comments. The most prevalent critique of the study was that it was too extensive, including too many big and difficult questions that the participants could not put enough time and concentration into. The items were criticized for sometimes being vague, too abstract, undifferentiated, and ambiguous. Some participants felt that they should have had opportunities to explain more closely what they meant by their answers and to motivate their beliefs. Also, specific criticisms were launched at the different parts of the study. Some participants thought that the fixed Q-sort format made the results misleading. Some of them further criticized the items of the polarity scale for being vague and sometimes almost unintelligible and the PIQ ideologies for their width and inclusion of too many disparate assumptions. However, many participants were also positive to the study, saying that it was fun, interesting, and instructive to participate, that the study was encompassing and well-designed, and that it stimulated their curiosity. I included the expression of positive and negative critique as a behavioral measure, in the form of two dichotomous variables.

**Computers and software.** The participants completed the two Q sorts on Dell laptop computers. For the Q sort task, I used the program Web-Q (Schmolck, 1999), which is an
Internet based application that allows participants to complete the test at home and e-mail the data to the person in charge of the research. But, I modified the java-script code so that I could copy the data from the screen into a text-file instead of having the participants e-mail me the data. I also translated all the text that was visible on the computer screen while completing the task into Swedish, and I removed some unnecessary buttons. The two anchors were set to agree least and agree most and the categories ranged from −3 to +3. The number of statements in each category was set to 4, 5, 6, 6, 5, and 4 (a total of 36) for the first Q-sample and 6, 8, 10, 11, 10, 8, and 6 (a total of 59) for the second Q-sample. The response mode was set to fixed, which means that all categories had to be filled before the Q-sort was complete. The Web-Q applications were run in Internet Explorer 6.0. For the factor analysis of the Q-sorts, I used the PQ-method software (Schmolck, 2002). The structural equation modeling was performed in Statistica, and all of the remaining data analyses were performed using SPSS.

Procedure

First, I seated the participants in a laboratory or in a small room in groups of 1 to 5 persons in size. In order to assure them that their responses would be anonymous, I asked them to pick up a small piece of paper from an envelope on which a number in the interval of 10 to 99 was written. This number was used as an identification code that participants entered on every questionnaire and on the computer tests.

Next, I told the participants that they would first be given two computerized tasks and then one long and a couple of short questionnaires. All participants were given the different tasks in the same order: (1) The questionnaire with demographical questions, (2) Q-sort of self-descriptions, (3) Q-sort of worldview beliefs, (4) the MPS, (5) the affect infusion questionnaire, (6) the PIQ, and (7) the evaluation questions.

Before they started with the first Q-sort, I showed them a simple example of a Q-sort with 12 statements, in order to make sure that they would understand how the program and the Q-sorting procedure works. In addition, I told them that the computer part was the most time consuming part of the test and that they should not spend too much time trying to perfect the Q-sorts, because then they could go on forever. Before each Q-sorting task, a written instruction appeared on the screen:
In this task you are supposed to sort different statements according to how much you agree with them/how well they describe you. You place the ones with which you agree the most in the category 3+ and the ones with which you agree the second most in the category 2+ and so it continues until 3-. Every category has to be filled with as many statements as it says that it is supposed to contain. There are no rank-orders within each category. If you have problems deciding which statement to move from a certain category, try to think about which statement characterizes your worldview/you the most. If you don’t understand what a certain statement means, or if you don’t want to take a stand on it, then place it on 0 and let it remain there even though the other statements change places. If you feel any uncertainty at all before or during your sorting then ask! The experimenter will show an example of how it works before you can start.

After a participant had completed the first Q-sort, I copied the resulting Q-data into a text file that was opened in notepad, and then I started the second Q-sort manually. After the second Q-sort was completed, the same copy and paste procedure was employed to save the data. After this, I asked the participants to fill out questionnaires number 4, 5, and 6. For those participants that had a reversed scoring bar on the MPS, I pointed this out to make them aware of it. With this exception, I used no verbal instructions for these questionnaires. Finally, I asked the participants if they wanted to comment on or criticize the study by filling out some evaluation questions. I recorded the time that each participant spent on the MPS and on the study as a whole. In order to make this possible, I did not give the participants questionnaires 5 and 6 until the MPS was done.

The reason that I ordered the Q sorts in the fashion described was that the first Q-sort was shorter and presumably easier to complete, which I assumed would make it easier for the participants to learn how to Q-sort efficiently. The affect infusion part was placed after the MPS and therefore the MPS had to be placed after the Q-sorts to avoid distorting the Q-sort results by drawing the participants’ attention to their moods. I placed the PIQ after the MPS and the Q-sorts so that it would not cause a distortion of these more important measures. In order to avoid these complications, and because of the exploratory nature of the study, I did not use any counterbalancing.

Results

Part 1 – Statistical analyses of the MPS

Before using the aggregate sample to analyze the MPS, I had to check if the reversion of the scoring bar had any effect on the responses. Two ANOVAs revealed that the two groups with
different scoring bars did not differ in humanism, $F=0.001, p=0.975$, (N=78), and normativism, $F=0.841, p=0.362$ (N=78). I considered this adequate for aggregating the sample.

**Factor analyses**

First, I conducted an exploratory factor analysis in SPSS, using PCA, and replacing missing values with the mean value of the item. The Kaiser criterion (eigenvalues>1) resulted in the extraction of 26 factors. However, Cattell’s scree plot test (see Fig. 2) revealed two main factors with eigenvalues of 7.613 and 6.448 respectively. A possible third factor, with an eigenvalue of 2.930, could be discerned as well. These factors accounted for 9.517%, 8.060%, and 3.662% of the total variance respectively.

Figure 2. *Scree plot of the factors derived from the modified polarity scale.*

![Scree Plot](image)

To see if these factors would correspond to humanism and normativism, all the 26 factor scores, generated in the analysis, were correlated with humanism (the sum of the humanism items) and normativism (the sum of the normativism items) scores. Significant correlations appeared only for factors 1, 2, and 3. The largest factor correlated significantly $.962 (p<.000)$
with normativism (N=311). The second largest factor correlated .950 (p<.000) with humanism (N=311). The third factor correlated .123 (p=.031) with humanism (N=311). This shows that there are indeed two main factors that correspond to humanism and normativism, and possibly a third factor explaining some of the variance of the humanism scale. The other factors are likely to be the result of measurement error.

To further examine this factor structure, Statistica was used for structural equation modeling. Before embarking on this, the large number of items had to be reduced in order for us to obtain a better overlook of the data along with a reduction of error variance. This was achieved by randomly arranging the items into groups of 5, separating humanism and normativism items, which resulted in 8 clusters of humanism items and 8 clusters of normativism items. All correlations between the different normativism clusters and between the different humanism clusters were significant (p<.05). First, these clusters were factor analyzed with a regular exploratory factor analysis, using PCA, and replacing missing values with the mean. This replicated the item-level finding that two main factors and one small factor can be discerned on the scree plot. The eigenvalues of the three factors were 3.991, 3.267, and 1.211, and they accounted for 24.942%, 20.415%, and 7.008% of the variance. Next, an item analysis helped to rearrange the clusters. The items with the highest loadings on the third factor were placed in the two clusters correlating with this factor.

A hierarchical factor analysis confirmed the presence of three primary factors, and it also showed that two of them were hierarchically arranged under a secondary humanism factor. The normativism clusters correlated between .5946 and .7485 with the first primary factor and these clusters taken together correlated .9994 with the secondary normativism factor (the same as the primary factor except for a slight varimax rotation to achieve orthogonality), and not at all with the secondary humanism factor. This demonstrates the stability of the normativism factor. Six of the humanism clusters correlated between .4428 and .5771 with the second primary factor and the two remaining humanism clusters correlated .3892 and .5702 with the third primary factor. The humanism clusters correlated between .4040 and .6056 with the secondary humanism factor and not at all with the normativism factor. The first group of clusters correlated .6873 with the first primary humanism factor and .7264 with the secondary humanism factor. The second group of clusters correlated .6933 with the second primary humanism factor and .7207 with the secondary humanism factor. All correlations were significant with an alpha level of .001.
Next, a confirmatory factor analysis was performed to see how well Tomkins’ original 1-factor model, the later established 2-factor model, and the 3-factor model suggested by previous factor analyses fit the data. The fit of the 1-factor model was very poor, as Table 1 shows. The path coefficients for normativism were all significant, ranging from .531 to .679. But the path coefficients for humanism were low, ranging from -.296 to .025, and only two of them were significant. The fit of 2-factor model was markedly better. All of the path coefficients were significant, ranging from .431 to .689 for humanism and from .523 to .707 for normativism. A 3-factor model was created by preserving normativism and splitting humanism into two subfactors. One subfactor consisted of the 10 items loading the highest on the small primary humanism factor (items 18, 20, 21, 23, 25, 26, 46, 47, 48 and 51), and the other subfactor was composed out of the 30 remaining items. This model showed only a slight improvement in fitness in comparison with the 2-factor model.

| Table 1. Fitness statistics and explained variance for 1-, 2-, and 3-factor models. |
|---------------------------------|---|---|---|---|---|---|
|                               | $\chi^2$ | df | p   | RMSEA | GFI | AGFI | $R^2$ |
| 1 factor                      | 543.96    | 104 | .000 | .177  | .682 | .584 | .249  |
| 2 factors                     | 260.12    | 104 | .000 | .0801 | .877 | .839 | .456  |
| 3 factors                     | 250.46    | 104 | .000 | .0774 | .881 | .844 | .524  |


The chi square is significant in all of the tested models ($p<.05$). A significant chi square means that a given model's covariance structure differs significantly from the observed covariance matrix. This result would normally not be expected with a good model. However, considering the parsimony of the models in relation to the complexity of the area that the items cover, the failure of the chi square test is not surprising. In addition, the large sample size would make even a small difference between the model and the data significant. Indeed, dividing chi-square by degrees of freedom to obtain a relative chi square value yields acceptable values for both the 2- and 3-factor models (see Kline, 1998 as cited in Garson, 2004).

Moreover, modern fitness indices suggest that GFI and AGFI should be at least .9 and RMSEA should be below .08 if the model is to be acceptable. These criteria are not met even by the 2- and 3-factor models. But these criteria are merely rules of thumb. Fitness should be
considered in relation to the field under investigation (Garson, 2004). Today, most questionnaires are constructed as a small set of items that are relatively similar to each other. This is done to maximize internal consistency and to make sure that each part of the questionnaire denotes the same highly isolated phenomenon, so that model fitness is maximized. What Tomkins did represents a fundamentally different sort of questionnaire construction. He tried to target the complex phenomenon of personal ideology with a huge amount of items that cover a wealth of different areas, and often the items lacked relationships to each other that were obvious on the surface. In light of this, the fitness of both the 2- and 3-factor model can be considered acceptable. On Tomkins’ theoretical grounds, or on the basis of theoretical parsimony, the 2-factor model may be preferable. But, on the other hand, caution should be taken to avoid oversimplification. I preserved the complexity of the 3-factor model in the present study. In this manner, I could evaluate the usefulness and meaningfulness of the third factor by looking at its relationships with other measures.

The 40-item humanism scale correlated $r=.954$, $p=.000$ (N=238) with the 30-item subfactor and $r=.672$, $p=.000$ (N=238) with the 10-item subfactor. The two subfactors correlated $r=.420$, $p=.000$ (N=238) with each other. The 40- and 30-item humanism scales did not correlate significantly with normativism, but the correlation between the 10-item humanism scale and normativism was near significant; $r=-.116$, $p=.074$ (N=238).

The items that constitute the small humanism subfactor (nr 18, 20, 21, 23, 25, 26, 46, 47, 48, and 51) do indeed seem to have a special quality that makes the factor interpretable. The first thing to note is that most of the items include an implicit or explicit emphasis on treating others with care and warmth. A second thing to notice is that some of the items make very strong claims, for example “No one has the right to threaten or punish another person” and “Juvenile delinquency is due to factors we do not understand. When we do understand these we will be able to prevent it in the future”. I will tentatively refer to this factor as care-oriented humanism. The form of humanism that I believe is most widely embraced in psychology today is not entirely compatible with care-oriented humanism. Proponents of this form of humanism claim that care-oriented humanists go too far in rejecting any attempts at controlling other people’s behavior. They say that accepting any behavior from an individual will, in reality, be equal to not accepting any of the behaviors and undermining the individual’s sense of self-worth. They do hold that interpersonal care and warmth is important, but they claim that it at least sometimes must be
coupled with control, for the benefit of all human beings in the long run. Care-oriented humanists on the other hand seem to believe that the inner goodness of human beings will flourish if the environment always provides lots of warmth and acceptance and little control.

**Item analyses of the MPS**

Next, I tried to optimize the scales by analyzing the items. None of the items with a modified translation correlated markedly higher with the total scores than the items with the original translation, so I kept the original translation. For the 2-factor model, I used a weak criterion, of a correlation of .2 or higher with the intended scale and .2 or lower with the other scale, for inclusion. Items number 9, 19, 40, 44, 48, 52, 53, and 54 correlated above .2 with both scales. Items number 8, 29, 34, 58, and 68 correlated with both scales and even higher with the scale they were not intended to correlate with. Items number 47, 65, 72, and 80 did not correlate above .2 with any of the two scales. All of these items were removed so that a 32-item humanism scale and a 31-item normativism scale remained. The changes in the correlation matrices were negligible on comparison with the original scales, except for the fact that the correlation between humanism and normativism changed from $r=0.074$, $p=0.194$, (N=311) to $r=-0.160$, $p=0.006$ (N=297). The 32-item humanism scale correlated $r=0.964$, $p<0.000$, (N=302), and the 31-item normativism scale correlated $r=0.966$, $p<0.000$, (N=305) with the original versions of their respective scale. In order to maintain comparability with previous research, I used the original 40-item scales in subsequent data analyses.

As for the two different humanism subscales from the 3-factor model, I only item analyzed the small sub factor (10 items), because the bigger factor (30 items) correlated $r=0.954$, $p=0.000$, (N=238) with 40-item humanism. Thus, I could exclude the 30-item scale from some data analyses to make things simpler. The 10 items of care-oriented humanism correlated between .249 and .597, $p<0.05$, (N=65) with the total humanism score. Although 4 of the items correlated with the other humanism subscale, I kept the care-oriented humanism subscale intact due to the low number of items that composed the scale.

I estimated the reliabilities of the scales by computing Cronbach’s alpha. The reliabilities were high for all scales except for the care-oriented humanism scale. For normativism, the alpha value was .86 (N=305) and for secondary humanism the alpha value was .79 (N=230). For the first humanism factor, the alpha value was .80, and for the second humanism factor, the alpha
value was only .49. The low reliability estimate for the care-oriented humanism scale was expected, because the scale includes few items and is still superficially heterogeneous.

Finally, I switched to the strategy of trying to find the items that were the most characteristic of each secondary factor instead of trying to optimize the scales by eliminating items. So, I interpreted the two factors by assuming that groups of items that correlate higher with the factor are more central to the meaning of the factor. The factor that correlated with humanism was characterized by a positive view of human beings, children, life, and things in general, coupled with an openness to feelings and viewing humanistic behavior toward other human beings as desirable. The normativism factor was characterized by a value placed on the ideals of being strong, self-disciplined, independent, and hard on yourself and others, as well as controlling your feelings. In addition, for some of the item pairs, both items correlated with the same factor. For example, humanism correlated with items that state both that you must act morally and that you must make yourself and others happy, in order to live a good life. The 20 items that correlated the highest with the normativism factor were items number 6, 7, 11, 17, 37, 39, 42, 43, 49, 50, 54, 60, 61, 63, 66, 67, 69, 71, 76, and 78. For humanism, the corresponding items were number 4, 8, 9, 16, 27, 31, 34, 36, 38, 41, 45, 46, 52, 57, 58, 64, 70, 73, 74, and 79. These items may be appropriate if a shortened version of the polarity scale must be used.

Sex and age correlations

I also correlated the humanism and normativism scores with the demographical data that were available from all of the five different samples of participants (data about sex were available for four samples and data about age were available for three samples). Age did not correlate significantly with any of the scales. Normativism correlated $r = .211, p = .001, (N=249)$ with being male. Humanism correlated $r = .160, p = .011 (N=249)$ with being female. But, a split of humanism into its two subscales revealed that in fact only care-oriented humanism correlated significantly with being female; $r = .063, p = .401, (N=178)$ for 30-item humanism and $r = .232, p = .002, (N=178)$ for care-oriented humanism.

Part 2 – Q-methodology and related statistical analyses

I analyzed the participants’ Q-sorts with the PQ-method software. Then I interpreted the resulting factors (worldviews and self-descriptions) qualitatively, in the sense of trying to
verbalize the qualities that emerge from the Q sorts in combination with the theoretical framework. These verbal interpretations are presented first. After this, descriptive data for all variables of interest are presented. Next, correlation and regression analyses are presented. Due to the large number of possible exploratory analyses, I made the three main clusters of variables (Q-sort worldview, Q-sort self-description, and measures of personal ideology) the focus of these analyses. The affect infusion test was dropped, because the measured variables did not permit construction of any useful and meaningful index of the amount of affect infusion.

Qualitative analyses

In PQ-method, I used PCA-analysis, varimax rotation, and automatic flagging in order to make the data analysis as automatic as possible. I reduced the number of factors to rotate gradually until at least five persons were designated as definienda of each factor. This resulted in four factors for both Q-samples. For the worldview factors, the eigenvalues were 26.643, 5.760, 3.904, and 3.010. They explained 23%, 15%, 8%, and 4% of the variance respectively, making a total of 50% explained variance. 37, 19, 8, and 5 persons defined these factors respectively. This means that only 9 persons did not define any factor. The standard errors of the factors were .082, .114, .174, and .218. For the self-description factors, the eigenvalues were 32.842, 7.095, 3.601, and 3.290. They explained 27%, 9%, 14%, and 9% of the variance respectively, making a total of 59% explained variance. 37, 11, 7, and 6 persons defined these factors respectively. 19 persons did not define any self-description factor. The standard errors of the factors were .082, .149, .186, and .200.

Persons that load significantly on not more than one single factor are typical of the factor and they are used to define it. I will refer to these persons as members and to the dichotomous values for membership as typicality values. However, one of the persons who defined worldview 4 loaded negatively on this factor, so I coded him as a non-member of that group. In the Q-analysis, the loading of each item in the Q-sample on each factor is calculated as a standardized and weighed mean of the ranks that the members of the factor give the item. These loadings are used in the interpretation of the factors. The magnitude of this loading, whether it is positive or negative, indicates the strength or the reaction to the item, and thereby how meaningful or relevant the item is to the participants. I will refer to this absolute magnitude as the meaningfulness of the item. Each person also has a loading on each factor, which is simply the
correlation between the person and the factor. I will call these loadings similarity values in subsequent data analyses.

PQ-method also generates data for each item about the differences between the rankings the item has in each in factor, that is, if there is consensus or disagreement on the ranking of each item between the different factors. I took a closer look at all of the items in the worldview Q-sample, except for a few that could not be assigned to one of the five categories of belief in a clear-cut way. This revealed that statements about metaphysics and epistemology were the least consensual of all statements between the worldviews. All of the 5 ontology items (materialism and spiritualism) were among the top 16 (out of 59) items that showed least consensus between the worldviews. In addition, the item that represented meaning of life was the fifth least consensual item. For epistemology, 5 out of the 7 items were among the 20 least consensual items. Items that concern human nature and morality were quite evenly distributed on the list that arranged items according to the consensus between factors. But, for the category of values, the pattern was much more varied. Some values received similar rankings in all of the worldviews whereas others were differed a lot between the worldviews. The six most consensual items of all, namely number 48, 42, 45, 51, 54, and 43, all pertained to values, whereas the least consensual item of all, namely number 49, also concerned a value. It is important to keep in mind that items that are disagreed between the worldviews are not necessarily high in meaningfulness. For example, the items concerning morality were generally not at all meaningful for the participants although their ranks did differ between the worldviews. Conversely, consensual items may be high in meaningfulness.

I interpreted the Q-factors by looking at the organization of items within the factor, arranging them from most disagreed to most agreed. But, to include the negative side of the question, I also sensitized the interpretation to comparison between factors. The absence of meaningfulness of an item in one factor may be important if the item is meaningful in the other factors. Because the worldviews were the most important variables in this study, I interpreted them more thoroughly, by taking the absence of meaningfulness more into account, than in the case of the self-descriptions. To preserve the nuances in the factor loadings, careful language use was necessary. For example, I used expressions such as “not endorse” and “not reject” to indicate lack of meaningfulness. That is, “not endorse” is not the same as “reject”, because the latter verb implies meaningfulness. To make interpretation possible, I had to make a pragmatically assumption: The
items with which the members agree the most and the least roughly correspond to agreement and disagreement in an absolute sense. That is, if you agree with an item more than with most other of a complex multitude of items, many of which partly contradict it, it is very likely that you in fact do agree with it. This is also clear when a group of items cluster with positive values and another group of items that are expected to contradict the items in the first group cluster with negative values, and vice versa. Generally, I used verbs like “endorse” and “reject” to indicate whether the items were agreed or disagreed, and adverbs and adjectives such as “completely”, “somewhat”, “strong”, “clear” to indicate the strength and clarity of the agreement or disagreement.

**Worldview 1.** This worldview is strongly antimaterialistic. According to this view, the world is more than just small indivisible particles, and human mind and behavior cannot be fully explained by material concepts such as electrochemical reactions; there are many important questions that scientists will never be able to answer and higher powers that are out of reach for scientific methods; there is no deeper material order of the universe that science will be able to unveil and some things are simply beyond rational explanation. This antimaterialism is intertwined with a strong scepticism about the possibility of obtaining certain knowledge expressed in the belief that scientific disciplines that cannot generate clear and unambiguous answers are not worth less than other scientific disciplines and that most problems do not have one optimal solution that can be found out through logical thinking.

This worldview portrays human beings as autonomous agents whose thoughts and feelings create their own internal reality. This is however not accompanied by an endorsement of epistemological relativism, let alone of moral relativism. Worldview 1 members do seem to believe in some universal things. For example, they strongly believe in the existence of an ultimate meaning of life, in accordance with their antimaterialism. This implies that there is some kind of reality that exists independently of the mental activity of human beings that may form the basis for the personally constructed realities. But, the constructive character of knowledge acquisition is still emphasized, along with the assertion that people should try to create their own view of how things work with a critical eye toward authorities.

The constructivism of this worldview is also apparent in its view of human beings as free autonomous agents that are not bound by limits of inheritance and environment. Human beings are considered masters of their own destinies and they can achieve almost anything if they are
determined and try hard enough, and happiness in life is seen as determined by the internal perspective rather than by external circumstances. The existentialistic ideas of human beings as free to create their own nature and meaning in life, and as having complete responsibility for their actions, are not agreed as strongly as the other statements that pertain to free will.

The view of human nature on an abstract level is very optimistic. But the view of human beings, on a more concrete level, is not as optimistic. Worldview 1 members accept that human beings have a basic drive to develop into loving and compassionate individuals and that this development will flourish unless it is constrained by the environment. They do however see this merely as a potentiality, allowing human beings at least some latitude in deciding their own characters. The portrayals of human beings as basically aggressive and egoistic, and acting exclusively out of self-interest, are on the other hand strongly rejected. Moreover, the worldview 1 members agree at least partly with the claim that aggressive and violent behaviors result from the frustration of needs for warmth and love rather than from human nature. At a more concrete level, there is a difference in actualization of presumably desirable qualities that are related to human relationships versus presumably desirable qualities that are related to epistemology. Human beings are in general better at actualizing the former. The claims that most people only pretend to care and would take advantage of each other if given the opportunity, and that human relationships are always uncertain and filled with conflicts, are rejected. But, statements that say that human beings are independent, willing to stand by their opinions in spite of group conformity, and insightful about their own strengths, weaknesses, and behaviors, are also rejected. Also, members of this worldview do not agree that the world is in actuality a friendly place that prevents people from being lonely.

The meaningfulness of the statements that pertain to moral philosophy is low, which indicates that these statements are, in comparison to the other statements, not very central to this worldview. However, the direction of the agreement and disagreement is in line with an emphasis on acting more in accord with feelings and other situational specificities to achieve the best consequences possible in a specific situation, than to be governed by principles, rules, or duties. But certain rules are still accepted. For example, worldview 1 members believe that it is always wrong to treat other human beings badly to gain personal profit and that it is wrong to care only about people that are close to you while ignoring the rest. This is in line with a very strong emphasis on interpersonal humanistic values such as striving for world peace and equality, and
being emphatic, helpful, tolerant, and forgiving. Also, the intrapersonal humanistic values of looking inward to be authentic, by trying to understand your own dreams, ideals, and feelings, and showing your authentic self to others, are strongly endorsed. Authentic happiness is seen as both desirable and possible, whereas living in a positive illusion is not considered to be true happiness. Contemplating your own existence is seen as somewhat important, but it is considered more important to live in the present and not worry too much about the future.

The values of being open-minded and not too rigid in your beliefs, being an independent thinker, and standing firm to your opinion regardless of what others think are also judged as important. The more normativistic values of not interfering with others, for example behaving properly to avoid offending them and to carry your own burdens without troubling them, are rejected. However, when it comes to other presumably normativistic and humanistic values, the tendency is different. According to this worldview, it is not necessarily important to be self-disciplined and competent in what you do, but it is indeed important to get the recognition and respect that you deserve for what you do accomplish, more so even than it is important to appreciate and create beauty.

In consideration of this entire worldview, there are five themes that are clearly and consistently manifested as well as meaningful for the members: (1) a belief that human beings are free autonomous agents that create their own inner reality by interacting with an outer, transcendental reality, (2) a belief that the world is more than material entities and events that science can provide rational explanations for, (3) a scepticism about the possibility of certain knowledge, (4) an optimistic view of human nature (5) a major emphasis placed on interpersonal and intrapersonal humanistic values, and on values that pertain to epistemology, such as being an open-minded, independent, and critical thinker.

Worldview 2. This worldview includes a strong scepticism about the possibility of certain knowledge, just like the previous worldview does. Worldview 2 members believe that there are many important questions that science will never be able to answer and that scientific disciplines need not provide clear answers and optimal solutions to problems in order to be valuable. But, unlike the case of worldview 1, the sceptic stance is here coupled with the relativism about the truth, that is, the ontological assumption that there are no final truths that hold true regardless of what perspective you adopt. Also, the emphasis on the constructive nature of knowledge, on the importance of creating you personal view of how things work, and on critically evaluating
authorities in relation to your personal view, is even stronger here than it is in worldview 1. The constructivism inherent in this worldview is also contrasted to that of worldview 1 in that it does not seem to include a clear belief in free will. The members of this worldview deny that human beings are free to create their own character from scratch and that they are masters of, and responsible for, their own destinies. However, the opposite statement, that man is bound by limits of inheritance and random events, is neither clearly agreed nor disagreed. Worldview 2 members seem to believe human beings must have some power over their own lives, due to the power of the mind to construct reality. For example, they believe that people’s happiness is affected by their internal perspective on events that occur to them.

Furthermore, this worldview is clearly antimaterialistic, though not at all to the same extent as worldview 1. The notion that everything in the universe, including human behavior and consciousness, is composed plainly out of material entities that are controlled by physical laws, and that are rationally explainable with the aid of scientific methods, is rejected. On the other hand, the idea that there are higher powers in the universe is also rejected, albeit less strongly.

The view of human nature is the most pessimistic of all four worldviews. According to this worldview, there is indeed a dark human nature that human beings cannot escape; human beings are not free to create their own characters; violent and aggressive behavior is a part of the human nature, rather than just being the result of frustration of needs derived from a person’s inner nature; almost every action is deep down motivated by self-interest, and human beings definitely do not have any basic drive toward developing into loving and compassionate individuals, but this does not necessarily make people mere aggressive and egoistic animals. Moving to the more concrete level, the picture is even more negative, with beliefs that people often just pretend to care, that they take advantage of each other when given the opportunity, and that they often claim to have standards of moral behavior that they do not live up to. Also, worldview 2 members believe that the desirable qualities that pertain to epistemology, such as standing firm to your opinion and resisting pressures for group conformity, and understanding your own weaknesses, strengths, and behaviors, are absolutely not actualized by people in general. In addition, this worldview portrays the world as an unfriendly place that makes loneliness inevitable.

The statements about moral philosophy are more meaningful in this worldview than they are in worldview 1. Both the notion of universal moral truths that hold true in all societies and eras and the normative claim that human beings should act in accord with general moral principles are
rejected. Instead, worldview 2 members believe that you should consider the specific circumstances that are relevant to the moral judgement; this does not mean that you should let your feelings in a given situation control you, but rather that you should use reason to decide how to act. Despite this focus on situational specificity, there is one moral rule of thumb that is embedded within this view, namely ethics of care. This appears to be connected to the negative view of humanity – if human beings are not capable of being very caring towards other human beings, let alone all living creatures, it seems reasonable that they should limit their concern to those that are close to themselves. In line with this, the idea that you sometimes must treat others badly in order to promote your own success is not rejected as strongly as it is in worldview 1. Also, with regards to values that have an interpersonal nature, there is a marked difference from worldview 1. The value of being emphatic, helpful, tolerant and forgiving is endorsed, but not as strongly as it is in worldview 1. In the emphasis placed on striving for world peace and equality, the difference is even greater, which is clearly in line with the expressed scepticism about the possibility of moral self-transcendence. However, when it comes to intrapersonal humanistic values, values that pertain to epistemological stances, and normativistic values, the emphases that are placed on these are very similar to those in worldview 1 – Worldview 2 members believe that it is important to look inward to understand your own feelings, ideals, and dreams, to be open-minded, and to stand firm to your own beliefs in spite of pressures for group conformity, and that it is quite important to get the respect you deserve, but they reject the normativistic value placed on the avoidance of improper behavior.

Considering this worldview in its entirety, five somewhat clear and meaningful themes can be discerned: (1) an emphasis on the constructive nature of knowledge, coupled with epistemological relativism and scepticism about the possibility of certain knowledge, (2) a weaker antimaterialistic stance than the one inherent in worldview 1, without the assumption of the existence of higher powers, (3) a belief that moral judgments should be based on rational considerations of specific circumstances rather than on universal principles and alleged moral truths, (4) a pessimistic view of human nature and of the possibility of moral self-transcendence, (5) a strong emphasis on intrapersonal humanistic values and on the epistemology-related values of being open-minded, independent, and critical in your thinking, and a weaker emphasis placed on interpersonal humanistic values.
Worldview 3. This worldview is differs from the two previous worldviews in incorporating a materialistic stance. According to this view, the world is basically constructed out of indivisible atomic particles and nothing else, and events are produced in accord with the laws of physics, so that science can provide rational explanations for them; reality is nothing more than these fundamentals; there are no personal realities that people’s thoughts and feelings create and truth is not relative; mysterious entities postulated by other theories simply do not exist; human consciousness and behavior can, to quite some extent, be explained by electrochemical reactions in the brain and the nervous system; there is absolutely not any kind of higher powers in the universe and there is absolutely no ultimate meaning of life.

As opposed to the two previous worldviews, the statement that scientists will be able to answer the most important questions is not rejected. Worldview 3 members believe that human beings can indeed discover important things about the world by using logical thinking and scientific methods. In comparison to worldview 1 and 2, this worldview leans a slight bit more toward the view that the main purpose of science is to discover reality rather than to create practical applications. It also affirms that scientists can obtain reasonably clear, unambiguous, and certain knowledge about the world and that this is what they should strive for. Although this view seems to allow somewhat certain knowledge, it is certainly far from the view of knowledge as a mere mental copy of reality; it views the theoretical structures that people project upon reality as crucial to the acquisition of knowledge. The emphasis on the importance of critically evaluating authorities and on creating your own view of how things are is in fact at least as strong in this worldview as in worldview 2. The emphasis placed on reasoning and logical thinking is also apparent in the moral philosophical assumptions of this worldview. According to this view, you should act according to rational considerations of principles and rules rather than letting your behavior be governed by feelings and temporary impulses. Specifically, this view subscribes to the principle that you always should act in a way that will produce the best possible consequences, regardless of violations to other principles, duties, or rules.

No clear view of human nature is manifest in this worldview. But on a more concrete level, the view of human beings is nearly as pessimistic as in worldview 2. All of the statements regarding human nature are placed slightly toward the disagreement pole. Neither statements depicting human beings as aggressive, egoistic, and acting out of self-interest, nor statements depicting human beings as striving to fulfill their inner drive toward self-actualization, are given
any substantial degree of agreement. However, this does not translate into a rejection of the concept of human nature, because the item stating that there is no human nature and that you create your own character is also placed toward the disagreement pole. The view of human beings, on a more concrete level, is much more pessimistic than it is in worldview 1 and slightly less pessimistic than it is in worldview 2. According to this worldview, people in general lack self-insight, would absolutely not stick to their opinion in spite of pressures for group conformity, and often hold moral standards that they do not live up to. However, items stating that uncertainty and conflict are inevitable parts of human relationships and that you sometimes have to take advantage of people to get ahead in life are not rejected at all as strongly as in any of the other worldviews, not even worldview 2. On the other hand, the tendency to view the world as an unfriendly place is still much stronger in worldview 2.

The meaningfulness of the statements concerning free will is quite low, but they point in the direction of scepticism about free will. The statement agreed the most is that human beings are completely bound by limits of inheritance and environmental influences. The idea that human beings, on a concrete level, can change their own lives and achieve things they work hard for is placed further toward the disagreement pole than in any of the other worldviews.

Moreover, this worldview seems to incorporate a form of pessimistic realism affirming that you should accept the world as it is, both its positive and negative aspects, rather than living in an illusion. Worldview 3 members see unpleasant feelings as natural and inevitable parts of human life that you should accept in order to grow as a human being. They also believe that people should realize that uncontrollable factors do have a lot of influence on their lives, that there are very negative elements to human life, and that there are absolutely no such things as higher powers or other mysterious entities or an ultimate meaning of life. Despite a certain pessimism and even cynicism, this does not seem to carry over straightforwardly from descriptive to prescriptive statements. Worldview 3 members do think that you should strive to make the world a better place and that it is wrong to care only about people that are close to you, ignoring the well-being of the rest. Interpersonal humanistic values like being empathic, helpful, forgiving and tolerant, and striving for world peace and equality, are emphasized at least as strongly as in worldview 1. The emphasis placed on different intrapersonal humanistic values is more mixed. According to worldview 3, you should indeed try to recognize your true feelings, although striving to understand your inner ideals and dreams and sharing your authentic self with people
close to you is not important.

The values related to epistemology, of being an independent and critical thinker who stands firm to his or her opinion in spite of pressures for group conformity, and not being close-minded, are emphasized even more strongly in this worldview than in worldview 1 and 2. Lastly, worldview 3 members think that it is quite important to be self-disciplined, responsible and competent in your work, and to produce things; a good life includes more than simply walking around in the present moment being happy; what respect and recognition you receive from others is less important, as long as you indeed do accomplish things.

In summarizing this worldview, there are at least five main themes that are quite clear and that discriminate this worldview reasonably well from the others: (1) the materialistic position that views the world as nothing more than material objects and events that can be examined and rationally explained using scientific methods, (2) a belief that somewhat clear and certain knowledge is possible and desirable, albeit certainly not easy to achieve, (3) the moral philosophical stance that you should act in accordance with reason, principles and rules, rather than feelings and impulses, to try to achieve the best possible consequences, (4) another prescription for individuals to realize and accept that there are dark aspects to human existence, (5) an emphasis placed on interpersonal humanistic values, values pertaining to epistemology, and the value of producing and accomplishing things to add meaning to life.

*Worldview 4.* One aspect of this worldview that clearly distinguishes it against the other worldviews is its strongly empiricistic view of knowledge. According to this worldview, knowledge is basically acquired by observing the environment and copying what you experience; theories cannot really add very much to your knowledge and therefore you try to objectively copy what you experience by relying on authoritative sources of information instead of trying to create your own view of how things work. Moreover, adherents to this worldview believe in optimal solutions and that scientific disciplines should be able to produce clear and unambiguous results in order to be valuable. Like in worldview 3, there is no rejection of the notion that science will eventually produce answers to the most important questions of today, which indicates a belief in the efficacy of science. But unlike worldview 3, emphasis is placed on observation rather than on logical thinking. Coupled with this empiricism is a belief that the human mind and behavior is simple and can, to quite some extent, be explained in reference to electrochemical reactions. But they do not accept more thoroughgoing materialistic and naturalistic views of the world as made
merely of indivisible material particles and that all events can be given rational explanations based on natural laws.

A very optimistic view of human nature is explicit in this worldview, which is quite similar to that of worldview 1. The biggest differences from worldview 1 are that human nature in worldview 4 is not viewed as something a human being is free to choose and that worldview 4 does not reject egoism as the primary motivator of human actions as does worldview 1. Worldview 4 members do however not accept that egoism and aggressiveness is a basic property of human nature. Rather, they accept that human beings have an inner drive to develop into loving and compassionate individuals, viewing aggressive and violent behaviors as the results of frustration of needs related to self-fulfilment. On a more concrete level, the view of human beings is slightly more pessimistic than it is in worldview 1, and it is less pessimistic than in worldview 3 and 4 with the addition that human beings are seen as basically quite similar. As with all of the other worldviews, adherents to this worldview believe that human beings are not very insightful about themselves and that they do not stand up for their own opinion in spite of group pressures. Worldview 4 members do not see human beings as more unfriendly than do worldview 1 members. But in worldview 1 it is asserted that human beings genuinely care about each other and that they would not take advantage of each other, which is not expressed in worldview 4.

A very salient element of worldview 4 is what might be called an anti-existentialistic point of view. In contrast to the other three worldviews, there is a strong and clear rejection of the possibility of free will. Worldview 4 portrays human beings as bound by limits of inheritance and environmental constraints, which determine the level of happiness; they reject the notions that human beings are free agents who create their own destiny, having full responsibility for their actions, and that the choice of internal perspectives influences happiness. But they do believe, perhaps on a more concrete level, that if you are really determined and work hard for something then you can often achieve it. These beliefs lead to the idea that you have to repress certain aspects of reality, thus living in an illusion, in order to preserve your own happiness; the concomitant idea that you should accept negative feelings as inevitable parts of life that need to be accepted for psychological growth to occur is rejected.

The moral philosophy of worldview 4 is similar to that of worldview 3. According to worldview 4, you should absolutely not act on impulses, but rather follow some moral principle; you should not let your feelings guide you and lead you astray; there is some universality to
moral truths. Consequentialism is endorsed, along with some emphasis on situational specificities to allow for adjustment to the possible consequences in any given situation. Ethics of care is also endorsed, which seems to be linked to the notion that human beings are not really free, reasoning that although it may be desirable to care about all living beings, it is probably impossible, because human beings cannot break free from the constraints that heredity and environment place on them, so instead you should focus on caring about persons that are close to you.

The anti-existentialistic and empiricistic stances inherent in this worldview are clearly manifested in the values emphasized – or more correctly deemphasized. According to this worldview, it is important to live and be happy in the present moment and not worry too much about the future. Pondering your own existence is quite unimportant, as well as looking inward to understand your inner ideals and dreams and being aware of your true feelings. The importance of presenting your authentic self to the people closest to you is also deemphasized. Furthermore, it is considered unimportant to be self-disciplined and competent and to create and experience beauty; what you achieve in life is completely irrelevant, as long as you are happy. On the other hand, it is considered important to get the recognition and respect that you do deserve. Also, the values pertaining to epistemology differ from to the other worldviews. The notion that it is important to be critical and independent in your thinking and to stand firm to your opinion regardless of what others think is rejected. The importance of being open-minded and not rigid in your beliefs is emphasized in all of the worldviews expect for this one. Some values that actually are emphasized in worldview 4 are related to social relationships. The interpersonally humanistic values of being empathic, helpful and forgiving and, to a somewhat less degree, striving for world peace and equality, are judged to be important. In addition, the interpersonally normativistic value of behaving properly is judged to be extremely important – it is in fact endorsed more strongly than all of the other items in the Q-sample.

In the entirety of worldview 4, there are at least five themes that are quite straightforwardly apparent: (1) a view of the acquisition of knowledge as copying reality, rather than constructing it, along with a somewhat materialistic view of human mind and behavior, (2) a view of human nature as basically positive and quite uniform, (3) a belief that moral behavior should be controlled by principles and reasoning, specifically embracing the principle of utilitarianism, which leaves room for adjustment to situational specificities, (4) anti-existentialism, as expressed in a denial of the possibility of free will and in a hedonistic view of inauthentic happiness as both
possible and desirable, (5) with the exception of the emphasis placed on values with an interpersonal nature, there is little significance attached to the values at large, especially intrapersonal and epistemological values are deemphasized in favor of a hedonistic and inauthentic striving for pleasure.

_Self-description 1._ Persons with this view of themselves are very satisfied with their own lives and with who they are, and they have a positive and optimistic outlook on the future and life in general and effective coping strategies. They have good friends whom they can confide in and to whom they can turn to in times of trouble and they feel secure in close relationships. They also claim that they do not have any trouble understanding why people feel the way they do, and that there are people around them who understand their personal views. Relationships are important to them, and they do express some concern about what other people think of them. They feel that others accept them as they are, they feel needed and important and they enjoy being alone, but the agreement of these items is not as strong as for the ones mentioned above. They perceive their lives as being filled with meaning, and they have clear goals to strive for. They are at peace with their lives, and not particularly afraid of death. They feel somewhat clear about their own thoughts and feelings, about who they are, and about where they are going in life, and they feel that they live fully doing exciting and important things that they deep down want to do. But the agreement to the latter items is not nearly as strong as the ones that have to do with life satisfaction, general happiness and friendship. Furthermore, they show some liking of intellectually challenging tasks and abstract thinking, and they have a need to know and investigate things, rather than living in uncertainty.

_Self-description 2._ The members of this group are unhappy with, and pessimistic about their lives, and about the future, and also somewhat unhappy with being the persons they are. They often feel helpless in the face of difficulties, and have trouble coping with them. But most of all, they lack clear goals and a meaningful purpose in life. They feel very confused and uncertain about who they are, where they are going in life, and what they really feel. But they do know, that the way they live right now does not reflect how they deep down feel they want to and should live. They are not very fond of uncertain situations, and they have a strong drive to know and to understand things. They think things through a lot, trying to investigate things with an open-mind, they can almost always see how both sides in a debate can be correct, and they have a hard time choosing between different options. When it comes to relationships to other persons, the
picture is not as straightforwardly negative. They feel that they can get new friends and keep the 
ones they have, and they do have some close friends that they can turn to. They also believe that 
they are good at understanding other persons. But on the other hand, they are very concerned 
about what other persons think of them, they do not feel accepted by, and important to, other 
people, and they do not feel secure in close relationships. As a result, there are some things that 
they are too afraid to disclose to others.

**Self-description 3.** The members of this group tend to be moderately happy with their lives 
and being the persons they are, and they feel moderately optimistic about the future and their 
abilities to deal with the difficulties in life. However, the clearly most defining characteristic of 
this group is that they place a very high value on their friends, with indications that friendship is 
what gives their lives meaning. They agree extremely strongly with items stating that they have 
good people around them that understand, accept and value them and that they have good friends 
that they can turn to and disclose all their secrets to, and they themselves have no trouble 
understanding others and keeping and getting new friends. However, they tend to feel very 
uncertain about whom they are and where they are going in life, they do not quite feel that they 
live fully, and they feel somewhat afraid of death. They do have a preference for a structured 
mode of life, and they often strive for closure in decisions as fast as possible, although they report 
that they are open to consideration of other opinions even after the decision is taken. They also 
lean towards preferring to consider concrete examples, and to be in the present moment, rather 
than engaging in abstract thinking.

**Self-description 4.** The persons that define this self-description are much like the members of 
self-description 3 moderately happy with their lives, moderately optimistic about the future and 
optimistic about their abilities to cope with trying situations. They also tend to feel that they do 
not live fully and authentically. But unlike self-description 3, they do not say that they are happy 
being who they are. An even bigger contrast to self-description 3 is that the items that pertain to 
friendship are very low in meaningfulness for members of group four. All of these items are in 
the direction of a positive view of their friends, and people around them, what other people feel 
about them and what they feel about other people, but the strength is low. However, they do not 
at all like being alone. They also do admit to being quite concerned about what others think of 
them and they are willing to sometimes use a social mask to get what they want. But still they are 
very aware of when they are not being their true selves. Though they are not at peace with their
pasts, they are aware of death, and they express an acceptance and preparedness of it. Furthermore, members of self-description 4 are even more inclined than members of self-description 2 to think things through thoroughly, and to see how both sides can be right in a conflict situation. But they are not as strongly driven toward intellectually challenging tasks as members of self-description 2, and not at all towards abstract thinking.

*Descriptive data*

Descriptive data for all variables used in the data analyses are presented in Table 2. To estimate the internal consistency of the scales used in the study, I assessed Cronbach’s alpha values. The obtained values were .64 for warmth from parents (N=77), .60 for control from parents (N=77), .76 for normativism (N=76), .76 for humanism (N=65), and .35 for care-oriented humanism (N=65).

However, the factor structure of the MPS did not seem as pure as the factor structures in the other samples and in the aggregate sample. An exploratory factor analysis yielded one factor correlating .651 with normativism and -.581 with humanism, one factor correlating .659 with humanism and .597 with normativism (p=.000 and N=78 for all correlations), and one smaller factor for each scale. But because the internal consistency was still adequate I used the scales as planned. Furthermore, some of the similarity values for the Q sorts and values from the PIQ deviated from the assumption of normality and could not be transformed to adequate this assumption. These variables were therefore mainly used in non-parametrical calculations.

*Correlations*

Correlations were calculated for all of the links in the model sketched in Figure 1. The most important correlations, between the main measures, are all included in Table 2. I created a fourfold categorization of humanism and normativism by splitting the high and low scorers in two groups on each scale. I did not use these values in subsequent data analyses, they are only presented in Table 2 to shed light on the central variables.

As predicted, both classic normativism and alternative normativism correlated positively with normativism, and positively with each other. Also, both classic humanism and alternative humanism did indeed correlate with humanism, but they were not correlated with each other.
Care-oriented humanism was correlated with classic humanism, but not with alternative humanism. Furthermore, classic normativism and classic humanism were negatively correlated.

Worldview 1 was, both on the typicality and similarity levels, positively correlated with all measures of humanism except for care-oriented humanism, especially strongly with alternative humanism, and it was strongly negatively correlated with all measures of normativism. Both similarity and typicality values of worldview 2 were negatively correlated with humanism and classic humanism. In addition, typicality of worldview 2 correlated positively with alternative normativism and negatively with alternative humanism. For worldview 3, both typicality and similarity values correlated positively with normativism and negatively with humanism and classic humanism. In addition, similarity to worldview 3 also correlated with classical and alternative normativism. Worldview 4 typicality and similarity values showed tendencies to correlate with both humanism and normativism. Both typicality and similarity correlated positively with classic humanism, and similarity also correlated positively with care-oriented humanism.

As for the self-descriptions, they were completely unrelated to the humanism and normativism scales. But they did show some interesting correlations with the PIQ and the Q-sort worldviews. Especially, self-description 1 was positively correlated with worldview 1 in all four combinations of typicality and similarity values. Self-description 2 correlated positively with worldview 2 and negatively with worldview 1 in three out of four combinations. In addition, typicality of self-description 4 was positively correlated with alternative normativism and negatively correlated with classical humanism. Self-description 3 similarity correlated negatively with worldview 3 on both similarity and typicality levels. Surprisingly, typicality of self-description 3 was positively correlated with classical normativism, whereas similarity was positively correlated with classical humanism. Self-description 4 was negatively correlated with alternative normativism for both typicality and similarity values.

Due to the large number of variables that were possible to correlate, I will only report those of the remaining correlations that reach significance or near-significance. Correlations between the main measures and the remaining variables are reported in Table 3. I kept a total of 15 demographic variables. Because many demographical variables correlated poorly with personal ideology, I aggregated a number of hypothesized predictors of humanism and normativism. Education involving social sciences, humanistic sciences, and behavioral sciences, left as
Table 3. Correlations between the central variables (humanism, normativism, worldviews and self-descriptions) and other variables (p<.1).

<table>
<thead>
<tr>
<th>Humanism</th>
<th>Original</th>
<th>Classic</th>
<th>Alternative</th>
<th>Care-oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female sex</td>
<td>.22</td>
<td>.43**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanistic program (1)</td>
<td>.23*</td>
<td>.23*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social sciences (1)</td>
<td>.20</td>
<td>.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social sciences (2)</td>
<td>- .20</td>
<td>- .28*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural sciences (1)</td>
<td>-.22</td>
<td>-.22</td>
<td></td>
<td>.20</td>
</tr>
<tr>
<td>Natural sciences (2)</td>
<td>.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political sciences (2)</td>
<td>.20</td>
<td></td>
<td></td>
<td>.20</td>
</tr>
<tr>
<td>Psychology (2)</td>
<td>.22</td>
<td>-.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain of political orientation</td>
<td>.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political socialism</td>
<td>-.26*</td>
<td>.24*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Articulate religious orientation</td>
<td>.23*</td>
<td>.24*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Believing, but no specific religion</td>
<td>.23*</td>
<td>.26*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No religious belief</td>
<td>-.26*</td>
<td>.23*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>.24*</td>
<td>.23*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warmth from parents</td>
<td>.21</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control from parents</td>
<td>-.26*</td>
<td>-.29*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal significance – self Q-sort</td>
<td>.23*</td>
<td>.30**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal significance – world view Q-sort</td>
<td>.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal significance – MPS</td>
<td>.39**</td>
<td>.22</td>
<td>.24*</td>
<td>.31*</td>
</tr>
<tr>
<td>Personal significance – PIQ</td>
<td>.32**</td>
<td>.36**</td>
<td>.24*</td>
<td></td>
</tr>
<tr>
<td>Personal significance – test as a whole</td>
<td>.28*</td>
<td>.30*</td>
<td>.25*</td>
<td></td>
</tr>
<tr>
<td>Personal significance – aggregate</td>
<td>.36**</td>
<td>.38**</td>
<td>.25*</td>
<td>.25</td>
</tr>
<tr>
<td>Relevance of the MPS</td>
<td>.36**</td>
<td>.19</td>
<td>.28*</td>
<td>.25</td>
</tr>
<tr>
<td>Positive criticism</td>
<td>.23</td>
<td>.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>.31**</td>
<td>.28*</td>
<td>.28*</td>
<td></td>
</tr>
<tr>
<td>Time spent on the MPS</td>
<td>-.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanism predictors aggregate</td>
<td>.24*</td>
<td>.21</td>
<td>.38**</td>
<td></td>
</tr>
<tr>
<td>Normativism predictors aggregate</td>
<td>-.28*</td>
<td>-.25*</td>
<td>-.40**</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normativism</th>
<th>Original</th>
<th>Classic</th>
<th>Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.29*</td>
<td>-.23*</td>
<td></td>
</tr>
<tr>
<td>Humanistic program (1)</td>
<td>-.35**</td>
<td>-.27*</td>
<td></td>
</tr>
<tr>
<td>Humanistic education (2)</td>
<td>-.30**</td>
<td>-.27*</td>
<td></td>
</tr>
<tr>
<td>Behavioral sciences (2)</td>
<td>-.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer sciences (2)</td>
<td>.30*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political liberalism</td>
<td>.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No religious belief</td>
<td></td>
<td></td>
<td>.21</td>
</tr>
<tr>
<td>Warmth from parents</td>
<td></td>
<td></td>
<td>-.22</td>
</tr>
<tr>
<td>Personal significance – PIQ</td>
<td></td>
<td>-.34</td>
<td></td>
</tr>
<tr>
<td>Time spent on the whole test</td>
<td>-.27*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanism predictors aggregate</td>
<td>-.34*</td>
<td>-.37**</td>
<td></td>
</tr>
<tr>
<td>Normativism predictors aggregate</td>
<td>.28*</td>
<td>.30**</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Worldview 1</th>
<th>similar</th>
<th>typical</th>
<th>Worldview 2</th>
<th>similar</th>
<th>typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural sciences (1)</td>
<td>-.19</td>
<td>-.22</td>
<td>Behavioral sciences (2)</td>
<td>.25*</td>
<td>.23*</td>
</tr>
<tr>
<td>Natural sciences (2)</td>
<td>-.36**</td>
<td>-.36*</td>
<td>Swedish culture</td>
<td>.24*</td>
<td>.23*</td>
</tr>
<tr>
<td>Humanistic education (2)</td>
<td>.19</td>
<td></td>
<td>Personal significance of the MPS</td>
<td>-.25*</td>
<td>-.29*</td>
</tr>
<tr>
<td>Computer sciences (2)</td>
<td>-.30**</td>
<td>-.21</td>
<td>Political orientation – middle or right</td>
<td></td>
<td>-.20</td>
</tr>
<tr>
<td>Articulate religious orientation</td>
<td>.31**</td>
<td>.32**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
No religious belief  -.29*  -.33**  Personal significance aggregate  -.21
Christian  .37**  .36**  Warmth from parents  -.30**
Warmth from parents  .30**  .21  Positive criticism  -.32**
Personal significance – self Q-sort  .20  Positive affect  -.26*
Personal significance – MPS  .23  Negative affect  .35**
Personal significance – PIQ  .31**  .21
Negative affect  -.30**  -.19
Humanism predictors  .33**  .27*
Normativism predictors  -.34**  -.38**

<table>
<thead>
<tr>
<th>Worldview 3</th>
<th>similar</th>
<th>typical</th>
<th>Worldview 4</th>
<th>similar</th>
<th>typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male sex</td>
<td>.25*</td>
<td></td>
<td>Social sciences (2)</td>
<td></td>
<td>-.19</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>-.20</td>
<td>Natural sciences (2)</td>
<td></td>
<td>.19</td>
</tr>
<tr>
<td>Natural sciences (2)</td>
<td>.21</td>
<td></td>
<td>Swedish culture</td>
<td></td>
<td>-.27*</td>
</tr>
<tr>
<td>Behavioral sciences (2)</td>
<td></td>
<td>-.30**</td>
<td>Articulate political orientation</td>
<td></td>
<td>-.20</td>
</tr>
<tr>
<td>Psychology (2)</td>
<td></td>
<td>-.19</td>
<td>Articulation of political</td>
<td></td>
<td>-.21</td>
</tr>
<tr>
<td>Computer sciences (2)</td>
<td>.19</td>
<td>.34**</td>
<td>orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political sciences</td>
<td>.21</td>
<td></td>
<td>Political liberalism</td>
<td></td>
<td>-.21</td>
</tr>
<tr>
<td>Political orientation – left</td>
<td>.20</td>
<td></td>
<td>No religious belief</td>
<td></td>
<td>-.23*</td>
</tr>
<tr>
<td>Articulated political orientation</td>
<td>.21</td>
<td></td>
<td>Believing, but no specific religion</td>
<td>.28*</td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>-.26*</td>
<td>-.24*</td>
<td>Political orientation – middle or right</td>
<td></td>
<td>-.32**</td>
</tr>
<tr>
<td>Personal significance of the PIQ</td>
<td>.21</td>
<td></td>
<td>Positive criticism</td>
<td></td>
<td>.21</td>
</tr>
<tr>
<td>Negative affect</td>
<td>.21</td>
<td></td>
<td>Time spent on whole test</td>
<td>.37**</td>
<td>.28*</td>
</tr>
<tr>
<td>Humanism predictors</td>
<td>-.32**</td>
<td>-.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normativism predictors</td>
<td>.36**</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-description 1</th>
<th>similar</th>
<th>typical</th>
<th>Self-description 2</th>
<th>similar</th>
<th>typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural sciences (1)</td>
<td>-.20</td>
<td></td>
<td>Behavioral sciences (2)</td>
<td></td>
<td>-.19</td>
</tr>
<tr>
<td>Behavioral sciences (2)</td>
<td>.30**</td>
<td></td>
<td>Personal significance – PIQ</td>
<td>-.24*</td>
<td>-.31*</td>
</tr>
<tr>
<td>Personal significance – MPS</td>
<td>.21</td>
<td>.23</td>
<td>Personal significance – test as a</td>
<td></td>
<td>-.29*</td>
</tr>
<tr>
<td>Personal significance – PIQ</td>
<td>.19</td>
<td></td>
<td>Whole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal significance – aggregate</td>
<td>.20</td>
<td></td>
<td>Warmth from parents</td>
<td>-.35*</td>
<td>-.27*</td>
</tr>
<tr>
<td>Warmth from parents</td>
<td>.25*</td>
<td></td>
<td>Control from parents</td>
<td></td>
<td>.21</td>
</tr>
<tr>
<td>Positive affect</td>
<td>.35**</td>
<td>.35**</td>
<td>Positive criticism</td>
<td></td>
<td>-.21</td>
</tr>
<tr>
<td>Negative affect</td>
<td>-.41**</td>
<td>-.34**</td>
<td>Negative criticism</td>
<td></td>
<td>.23*</td>
</tr>
<tr>
<td>Humanistic predictors</td>
<td>.21</td>
<td>.19</td>
<td>Positive affect</td>
<td>-.24*</td>
<td>-.38**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Negative affect</td>
<td>.64**</td>
<td>.56**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-description 3</th>
<th>similar</th>
<th>typical</th>
<th>Self-description 4</th>
<th>similar</th>
<th>typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female sex</td>
<td>.19</td>
<td></td>
<td>Natural sciences (1)</td>
<td></td>
<td>.25*</td>
</tr>
<tr>
<td>Behavioral sciences (2)</td>
<td>.26*</td>
<td></td>
<td>Social sciences (1)</td>
<td>-.24*</td>
<td></td>
</tr>
<tr>
<td>Political orientation – left</td>
<td>.32**</td>
<td></td>
<td>Humanistic program (1)</td>
<td>-.27*</td>
<td></td>
</tr>
<tr>
<td>Articulation of political orientation</td>
<td>.24*</td>
<td></td>
<td>Behavioral sciences (2)</td>
<td></td>
<td>-.19</td>
</tr>
<tr>
<td>Warmth from parents</td>
<td>.50**</td>
<td></td>
<td>University level points</td>
<td>-.27*</td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>.24*</td>
<td></td>
<td>Believing, but no specific religion</td>
<td>-.27*</td>
<td></td>
</tr>
<tr>
<td>Negative affect</td>
<td>-.40**</td>
<td></td>
<td>Humanism predictors</td>
<td>-.24*</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** * Correlations are significant at \( p < .05 \). ** Correlations are significant at \( p < .01 \). Remaining correlations are near significant \( (p < .1) \). Correlations involving similarity values are non-parametrical. Those variables that did not correlate \( p < .1 \) with any variant of each construct (humanism, normativism, worldview 1 to 4 and self-description 1 to 4) were excluded from the presentation. The (1) after some variables denotes college education, whereas the (2) denotes university level education.
political orientation, being an articulate or non-articulate religious believer, and being of female sex were summed to predict humanism. Education involving natural sciences, political orientation to the right of the leftists, not having religious beliefs, and being of male sex were summed to predict normativism. This extended the number of demographical variables to 17. The numbers of the other variables were 7 for political orientation, 4 for religious orientation, 6 for personal significance, 8 for the self-descriptions, 8 for the worldviews, and 7 for personal ideology. In addition, the variables related to affect infusion were correlated with most of the other variables. Turning to Table 3, this makes for a total of 40 variables that were correlated with the measures of personal ideology and 37 that were correlated with the Q-sort variables.

There are some clear trends in the correlations shown in Table 3. Humanism correlated positively with positive affect for all measures of humanism except for care-oriented humanism. Related to this, humanism correlated positively with ratings or personal significance and relevance, and with voicing of positive criticism. Moreover, both humanism and care-oriented humanism correlated positively with reported warmth from parents and negatively with reported control. When it comes to education, humanistic measures tended to correlated positively with an educational background within the social sciences and negatively with an educational background within the natural sciences. Interestingly, care-oriented humanism correlated negatively with having studied psychology. Furthermore, women tended to be more humanistic than men, especially in the form of alternative humanism. As expected, the aggregates of humanism predictors correlated positively with humanism and the normativism predictors correlated negatively with the measures of humanism, with the exception of care-oriented humanism. Lastly, humanism and alternative humanism correlated positively with having an articulate religious orientation, namely Christianity, and classic humanism correlated positively with believing, but not in any specific religion. Normativism and classic normativism correlated negatively with age and with an educational background involving humanistic subjects. Normativism correlated with having studied computer sciences. These two measures also correlated positively with the normativism predictors and negatively with the humanism predictors. Alternative normativism was largely unrelated to all the 37 variables.

Worldview 1 was positively correlated with religiosity, parental warmth, personal significance, and humanism predictors, and it was negatively correlated with natural sciences education, normativism predictors, and negative affect. Worldview 2 was related to having a
Swedish cultural background and to giving the MPS low significance ratings. Mood was related to the typicality values, so that membership was correlated with more negative affect and less positive affect. As for worldview 3, the similarity values were positively correlated with being male and with normativism predictors, and they were negatively correlated with humanism predictors and being christian. Typicality of worldview 3 was correlated with having studied computer sciences rather than behavioral sciences and with a leftist political orientation. Similarity to worldview 4 was correlated with having religious beliefs, but not adhering to a specific religion. Interestingly, time spent completing the whole test was not only correlated with typicality of worldview 4, but the correlation was even stronger with similarity to this worldview.

Self-description 1 correlated positively with positive affect and humanistic predictors and negatively with negative affect. Similarity also correlated with having studied behavioral sciences and warmth from parents. This self-description also showed some tendencies to correlate with personal significance. Self-description 2 most notably correlated strongly positively with negative affect. Moreover, it correlated negatively with positive affect and warmth from parents and it showed some tendencies to correlate with personal significance and voicing of criticism in line with the affect. Self-description 3 similarity correlated positively with having studied behavioral sciences, a leftist political orientation, warmth from parents, and positive affect, and it correlated negatively with negative affect. Self-description 4 similarity correlated positively with natural sciences education and negatively with social sciences and humanistic education, humanism predictors and university points.

I also correlated personal significance, demographics, and political and religious orientation with each other, but I will only mention the most clear and interesting ones. Male sex ($r=.336, .346, \text{ and } -.410$) and an educational background including political sciences ($r=.283, .265, \text{ and } -.247$), rather than behavioral sciences ($r=-.242, -.299, \text{ and } .356$), correlated positively with having a more articulate political orientation, as well as actually articulating it, and negatively with being insecure about political orientation. Males were higher than women on both socialism and liberalism ($r=.285$ and $.254$). Political orientation to the middle or right correlated positively with achieved university points ($r=.255$). College level education within the social sciences correlated positively with adhering to a religion ($r=.254$), specifically Christianity ($r=.289$). These correlations were significant on the .05 alpha level with $N=78$. 
Finally, I constructed regression models to predict humanism and normativism. Because of the large number of predictors that could be used, and their differing centrality, I chose a stepwise regression procedure, replacing missing values with mean values. The similarity values were used here, despite the fact that all of them were not completely normally distributed, because they did not seem to disrupt the regressions and they were much better as predictors than the typicality values. Humanism and normativism were predicted from (1) worldviews, (2) political and religious orientation, (3) personal significance and mood, and (4) demographics. The results are presented in Table 4 and Table 5. Only significant and near significant predictors are reported. 4 predictors were entered in the first step, 7 in the second step, 3 in the third step, and 15 in the last step. Similarity to worldview 4 predicted humanism in the positive direction, and similarity to worldview 2 and 3 predicted humanism in the negative direction. Also, positive affect, personal significance, and female sex added to the explained variance. Similarity to worldview 1 and to worldview 2 predicted normativism in the negative direction, and in the fourth step, similarity to worldview 4 also predicted normativism, but in the positive direction. Most of the other variables failed to predict normativism.

To elaborate the relationship between the MPS and the Q-sort worldviews, the similarities to the worldviews were predicted from normativism, humanism, and care-oriented humanism. The results are displayed in Table 6. Similarity to worldview 1 was predicted in the positive direction by humanism and in the negative direction by normativism and care-oriented humanism. Similarity to worldview 2 was predicted by care-oriented humanism in the positive direction, by humanism in the negative direction, and also near significantly by normativism in the negative direction. Similarity to worldview 3 was predicted by normativism in the positive direction and by humanism in the negative direction. No significant model was acquired for worldview 4.
Table 4.  
*Hierarchical regression model of humanism*

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>Sig.</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>R² change</th>
<th>Sig. F change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Worldviews</td>
<td>6.546</td>
<td>.000</td>
<td>.259</td>
<td>.219</td>
<td>.259</td>
</tr>
<tr>
<td>2</td>
<td>Political and religious orientation</td>
<td>3.451</td>
<td>.001</td>
<td>.382</td>
<td>.271</td>
<td>.123</td>
</tr>
<tr>
<td>3</td>
<td>Mood and personal significance</td>
<td>4.137</td>
<td>.000</td>
<td>.492</td>
<td>.373</td>
<td>.110</td>
</tr>
<tr>
<td>4</td>
<td>Demographics</td>
<td>4.499</td>
<td>.000</td>
<td>.533</td>
<td>.415</td>
<td>.041</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Worldview 2</td>
<td>-11.75</td>
<td>-.224</td>
<td>-1.93</td>
</tr>
<tr>
<td></td>
<td>Worldview 3</td>
<td>-14.39</td>
<td>-.256</td>
<td>-2.05</td>
</tr>
<tr>
<td></td>
<td>Worldview 4</td>
<td>14.89</td>
<td>.265</td>
<td>2.52</td>
</tr>
<tr>
<td>2</td>
<td>Worldview 3</td>
<td>-14.17</td>
<td>-.252</td>
<td>-1.98</td>
</tr>
<tr>
<td></td>
<td>Worldview 4</td>
<td>17.27</td>
<td>-.308</td>
<td>2.66</td>
</tr>
<tr>
<td></td>
<td>Articulate political orientation</td>
<td>14.74</td>
<td>.655</td>
<td>1.89</td>
</tr>
<tr>
<td></td>
<td>Political orientation to the left</td>
<td>7.91</td>
<td>.315</td>
<td>1.74</td>
</tr>
<tr>
<td></td>
<td>Articulation of political orientation</td>
<td>-21.86</td>
<td>-1.98</td>
<td>-2.86</td>
</tr>
<tr>
<td>3</td>
<td>Worldview 3</td>
<td>-14.90</td>
<td>-.265</td>
<td>-2.24</td>
</tr>
<tr>
<td></td>
<td>Worldview 4</td>
<td>17.71</td>
<td>.316</td>
<td>2.93</td>
</tr>
<tr>
<td></td>
<td>Articulate political orientation</td>
<td>13.03</td>
<td>.579</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>Articulation of political orientation</td>
<td>-17.98</td>
<td>-.804</td>
<td>-2.42</td>
</tr>
<tr>
<td></td>
<td>Personal significance sum</td>
<td>.787</td>
<td>.224</td>
<td>2.12</td>
</tr>
<tr>
<td></td>
<td>Positive affect</td>
<td>.364</td>
<td>.247</td>
<td>2.27</td>
</tr>
<tr>
<td>4</td>
<td>Worldview 3</td>
<td>-12.25</td>
<td>-.218</td>
<td>-1.88</td>
</tr>
<tr>
<td></td>
<td>Worldview 4</td>
<td>21.27</td>
<td>.379</td>
<td>3.53</td>
</tr>
<tr>
<td></td>
<td>Articulation of political orientation</td>
<td>-17.44</td>
<td>-.780</td>
<td>-2.43</td>
</tr>
<tr>
<td></td>
<td>Positive affect</td>
<td>.397</td>
<td>.269</td>
<td>2.54</td>
</tr>
<tr>
<td></td>
<td>Personal significance sum</td>
<td>.669</td>
<td>.191</td>
<td>1.85</td>
</tr>
<tr>
<td></td>
<td>Female sex</td>
<td>5.55</td>
<td>.243</td>
<td>2.35</td>
</tr>
</tbody>
</table>

*Note: The first table shows a summary of the models and the second table shows the significant and near significant predictors.*
Table 5. *Hierarchical regression model of normativism*

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>Sig.</th>
<th>R^2</th>
<th>Adjusted R^2</th>
<th>R^2 change</th>
<th>Sig. F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Worldviews</td>
<td>11.983</td>
<td>.000</td>
<td>.457</td>
<td>.419</td>
<td>.457</td>
</tr>
<tr>
<td>2</td>
<td>Political and religious orientation</td>
<td>4.386</td>
<td>.000</td>
<td>.491</td>
<td>.379</td>
<td>.034</td>
</tr>
<tr>
<td>3</td>
<td>Mood and personal significance</td>
<td>3.517</td>
<td>.001</td>
<td>.512</td>
<td>.366</td>
<td>.021</td>
</tr>
<tr>
<td>4</td>
<td>Demographics</td>
<td>4.543</td>
<td>.000</td>
<td>.597</td>
<td>.466</td>
<td>.085</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Worldview 1</td>
<td>-27.96</td>
<td>-.619</td>
<td>-4.68</td>
</tr>
<tr>
<td></td>
<td>Worldview 2</td>
<td>-21.13</td>
<td>-.402</td>
<td>-3.37</td>
</tr>
<tr>
<td>2</td>
<td>Worldview 1</td>
<td>-30.14</td>
<td>-.667</td>
<td>-4.25</td>
</tr>
<tr>
<td></td>
<td>Worldview 2</td>
<td>-19.83</td>
<td>-.377</td>
<td>-2.71</td>
</tr>
<tr>
<td>3</td>
<td>Worldview 1</td>
<td>-32.13</td>
<td>-.711</td>
<td>-4.36</td>
</tr>
<tr>
<td></td>
<td>Worldview 2</td>
<td>-20.18</td>
<td>-.383</td>
<td>-2.61</td>
</tr>
<tr>
<td>4</td>
<td>Worldview 1</td>
<td>-32.39</td>
<td>-.717</td>
<td>-4.78</td>
</tr>
<tr>
<td></td>
<td>Worldview 2</td>
<td>-22.07</td>
<td>-.419</td>
<td>-3.10</td>
</tr>
<tr>
<td></td>
<td>Worldview 4</td>
<td>11.60</td>
<td>.206</td>
<td>1.78</td>
</tr>
<tr>
<td></td>
<td>Humanistic education (2)</td>
<td>-9.43</td>
<td>-.324</td>
<td>-3.12</td>
</tr>
</tbody>
</table>

**Note:** The first table shows a summary of the models and the second table shows the significant and near significant predictors.
Table 6. **Regression models predicting Worldview similarity from the MPS**

<table>
<thead>
<tr>
<th>Worldview 1</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.376</td>
<td>.345</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normativism</td>
<td>-.010</td>
<td>-.369</td>
<td>-3.60</td>
<td>.001</td>
</tr>
<tr>
<td>Humanism</td>
<td>.016</td>
<td>.671</td>
<td>4.51</td>
<td>.000</td>
</tr>
<tr>
<td>Care-oriented humanism</td>
<td>-.034</td>
<td>-.453</td>
<td>-3.04</td>
<td>.004</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Worldview 2</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.172</td>
<td>.131</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normativism</td>
<td>-.004</td>
<td>-.199</td>
<td>-1.685</td>
<td>.097</td>
</tr>
<tr>
<td>Humanism</td>
<td>-.010</td>
<td>-.547</td>
<td>-3.193</td>
<td>.002</td>
</tr>
<tr>
<td>Care-oriented humanism</td>
<td>.020</td>
<td>.350</td>
<td>2.039</td>
<td>.046</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Worldview 3</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.285</td>
<td>.250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanism</td>
<td>-.008</td>
<td>-.477</td>
<td>-2.995</td>
<td>.004</td>
</tr>
<tr>
<td>Care-oriented humanism</td>
<td>.008</td>
<td>.152</td>
<td>.950</td>
<td>.346</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Worldview 4</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.113</td>
<td>.069</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normativism</td>
<td>.002</td>
<td>.141</td>
<td>1.15</td>
<td>.255</td>
</tr>
<tr>
<td>Humanism</td>
<td>.003</td>
<td>.182</td>
<td>1.03</td>
<td>.309</td>
</tr>
<tr>
<td>Care-oriented humanism</td>
<td>.007</td>
<td>.142</td>
<td>.798</td>
<td>.428</td>
</tr>
</tbody>
</table>

**Note:** Model summaries and predictors.
Discussion

I have divided this discussion into three parts. First, I discuss possible sources of bias and error in this research and general methodological limitations. Second, I try to delineate the most important conclusions from this research, and I generate new models, ideas, and hypotheses for further research. Finally, I discuss guidelines for future research within the field of worldviews.

Methodological issues

The comprehensiveness of this study required both time and effort from the participants. Some of the participants felt that items that deal with so fundamental matters would deserve more attention and thought. Most of the participants put a lot of effort into Q-sorting carefully, whereupon they completed the MPS markedly faster. This is a possible explanation of the impurity of the factor structure of the MPS. Another possible explanation is that the fact that the Q-sorts were completed before the MPS may have led to a transfer effect.

Another problem was that some of the data were in the form of dichotomous variables that were based on one item or just a few items. Some of these items were adequate. Others should have been measured with fewer variables and more items for each variable, in order to obtain reliable measures. For example, simply asking the participants what their political or religious orientations are will lead to an assessment of the words that people use to describe their own ideologies, rather than the contents of their ideologies per se. Two persons who say that they adhere to different perspectives may very well have similar beliefs. Furthermore, it proved to be difficult to classify the political ideologies into categories such as left or right, because this categorization seems inadequate in Swedish society. This resulted in variables on two different levels of generality with partial overlap. Asking about specific attitudes, concrete or abstract, would probably have given more reliable measures. However, aggregation of some of the demographical items did prove to give them the predictive power that was expected a priori.

Apart from this, I believe that the greatest source of bias in this research was due to selection. This kind of bias is inherent in the selection of the area of research, the sample of participants, the method in itself, the implementation of the method, and finally in the assessment and interpretation of the results. Selection operates through the preconceptions of the researchers. Research projects that deal with complex areas may be especially prone to selection bias.
I have already argued for the importance of studying people’s worldviews in general and for the adequacy of the methods that I have used. However, I am not sure that it was a good idea to assess self-descriptions with Q-methodology. Although Q-technique is excellent for probing deeper into people’s systems of beliefs, sacrifices in interpretability may sometimes overshadow these benefits. In this study, the worldviews were the central variables and other variables such as self-descriptions were intended to shed light on the worldviews. More standardized measurements, instead of the rather complex mix of affective and cognitive well-being and cognitive styles that I obtained with the self-descriptions, would maybe have shed more light on the worldviews, although they probably would have been less interesting in themselves. However, there were nevertheless some clear trends in the data, showing a general manifold of psychological health that was related to some of the worldviews.

When it comes to the sampling of items and participants, the selection bias gets especially problematic. Almost all individuals who participated in this study were Swedish students, and most of them had studied predominantly within the social sciences. Both results from this study and theoretical considerations underscore that worldviews, or at least parts of them, are sensitive to variations in culture, sex, educational background and so on. This means that you have to be careful to take specific characteristics of the sample into consideration when trying to generalize the results. Specifically, students may be more sophisticated in their beliefs and more used to abstract reasoning than people in general. Moreover, the prevalence of psychology students as participants in the present study may have made the sample disproportionately humanistic and anti-normativistic. Also, most of the participants were young, perhaps still in the process of identity formation, making their worldviews particularly unstable. Sampling of the items is another important issue. Due to time constraints, I had to start collecting data before I had reviewed all relevant research and theories and developed my framework fully. Also, Kolko-Rivera’s (2004) article had not yet been published. Because of this, the items were not derived from a theoretical framework in a completely systematical fashion. For example, I failed to include items that concern the fixedness or mutability of human nature. Also, some items proved to be too consensual between different worldviews and others were not much help in the interpretation of the worldviews. Moreover, some of the items were somewhat complex, not only expressing a belief, but also a line of reasoning. This has the advantage that a strong endorsement or rejection of an item says a lot more about a worldview if the item is complex than if it is
simple. But, if any endorsement or rejection of a complex item is weak or absent, it may be hard to know if a specific part of the item is nevertheless endorsed or rejected. This is where the gestalt of the worldview comes into play. In this study, the interpretation of relative agreement and disagreement with the items was, in light of the whole worldview gestalts, often a surprisingly straightforward affair.

Further selection issues concern the methods per se. The purpose of the personal ideologies questionnaire (PIQ) was not to create a psychometrically perfect measure of personal ideology, but rather to get an indication of how the participants react to an entire ideology. One problem is that the summaries may fail to capture the core of humanism and normativism, because I outlined them more from the items in the polarity scale than from Tomkins’ descriptions of humanism and normativism. In this study, most of the participants reacted to the PIQ with an endorsement of humanism and a strong rejection of normativism. All but four participants chose a humanistic ideology on the forced choice item. Although this is interesting, it did create a floor- and a ceiling effect, which decreased the sensitivity of the instrument. Despite these problems, the data analyses showed that this instrument did produce meaningful data, because it rendered a convergent validation of the modified polarity scale (MPS).

The validity and reliability of the polarity scale have not previously been convincingly demonstrated. Different versions of the polarity scale have been constructed to improve the psychometric properties. However, the Swedish version of the modified polarity scale did demonstrate higher reliability estimates than other versions. I have also argued that the 2-dimensional model does show adequate fitness in relation to the data used in this study. This shows that the scale does indeed seem to measure two dimensions that are close to the theoretical constructs of humanism and normativism. Furthermore, the normativism factor proved to be very stable, whereas the humanism factor split up into one main factor and one smaller factor on closer scrutiny. The factor that I labeled care-oriented humanism does seem to denote a real phenomenon, indicated by meaningful correlations with other variables, although it is just briefly touched upon in the polarity scale. A different scale needs to be developed if care-oriented humanism is to be assessed reliably. Also, a problem with the items per se, that may lead to deficiencies in the validity and reliability, is that many of them are vague and even close to unintelligible. A questionnaire is much more susceptible to vagueness in the items than a Q-sample is, because the questionnaire items take on meaning by themselves and not in relation to
each other. Moreover, because of the structure of the original polarity scale, there are no reversed items in the modified polarity scale. This may create problems with acquiescence bias. I will address the issue of the validity of the MPS in greater depth in the discussion of conclusions.

When it comes to Q-methodology, two issues are especially important. The use of a fixed response set made stringent interpretation of the factors extraordinarily difficult, because there was no psychologically neutral mid-point. But, on the other hand, I do not think that it would have made any practical difference if the response set would not have been fixed, because the themes that I found in the worldviews were surprisingly clear. The second important issue is whether similarity or typicality should be used to associate persons with factors. A problem in using parametrical statistics was that the similarity values tended not to be completely normally distributed. Rather, they had a slight tendency to cluster, and deviate from linearity, at the extremes. The reason for this is that the standard procedure in PQ-method, that I used, rotates the factors so as to maximize the number of typical persons, rather than to achieve normality. Anyway, the data analyses gave, for the most part, similar results regardless or whether similarity or typicality values were used. There were some exceptions though, especially when the numbers of typical persons were low. This shows that some parts of the descriptions of the worldviews may not be reflected in the similarity values. But, on the other hand, the similarity values, being calculated as a weighed average of the total, can be expected to give a good picture of the worldview as a whole, although they may hide certain, perhaps more peripheral, qualities. The problem with similarity values is that it is difficult to know precisely which aspects of the worldviews that are related to other constructs. The problem with typicality values is that they are crude and arbitrary, at least when computer program automatically assigns typicality. It is, however, possible to manually create a less arbitrary categorization, using previous research, theories, and intuition. But, in this study, I wanted to abstain from imposing too much of my preconceptions in the data analysis stage, because neither Q-technique nor the study of worldviews is very far developed.

There was also a potential problem with the implementation of Q-technique in this study. This has to do with the difficulty of Q-sorting as much as 59 items into 7 categories, when the items are quite complex in themselves and in some cases hard to compare to each other. However, the idea with the Q-continuum is that people sort the items in accord with their own reactions to them, so that they can compare the strength of their own reactions no matter how much the
contents of the items differ from each other. If there nevertheless were problems with sorting the items, it is likely that this only had a slight effect on reliability, because the data from the Q Sorts were undeniably meaningful, as demonstrated by, for example, the correlations with personal ideology. What about validity? Q Methodology does not start with any a priori constructs that are candidates of being measured in a valid way. However, the interpretations of the Q factors, or a posteriori constructs, can be more or less valid, in the sense of adequately describing the factors. But, just like different instruments can be more or less valid measures of the same construct, different descriptions can be more or less valid interpretations of the same construct. There are many different ways to interpret an a posteriori construct, depending on what qualities are interesting and relevant to the researchers’ perspectives. Striving for consensus between different researchers about what is the best interpretation, or allowing several interpretations, are possible ways to deal with this problem. But it is still obvious that the subjective perspectives of the researchers play a major role in assessing validity.

More generally, this deals with the problem of selection in the assessment and interpretation of the results and in the drawing of conclusions. This is often addressed as a problem in research that is based upon methods that are labeled as qualitative, in the sense that the qualitative understanding of the researcher, rather than quantitative instruments, plays an essential role in interpreting the results and drawing conclusions. In this study, I may have implicitly assumed that the worldviews of the participants were coherent, so that I imposed artificial consistency on them. Moreover, the researchers’ own worldviews and especially what concepts they consider important for describing worldviews in general do inevitably influence how they make sense of other persons’ worldviews. However, this form of selection bias is also present in methods commonly referred to as quantitative that are more based on statistical probabilities and rules of interpretation, that are connected to carefully developed measures, than so called qualitative methods are. Statistical analyses and rules of interpretation are also chosen in selective ways. Conclusions that are based on dogmatic application of statistical analyses and rules of interpretation, rather than solid theoretical understanding of different analyses, criteria, and rules, are in reality especially prone to be impregnated with selection bias.

In fact, I want to deal with this type of selection bias in a two-fold manner. First, I claim that the subjective viewpoint of the researcher should be regarded as an asset rather than as a threat. This means that it is important that the researcher develops personal knowledge in the area of
research, while maintaining an openness and analytic distance to theories and empirical results. Theoretical ideas should, at least initially, emerge from data, that is, from careful analysis of all kinds of relevant research and theorizing, thus conceptualizing and organizing data, rather than forcing preconceived ideas upon data. Borrowing a term from grounded theory (Glaser, 2004), this corresponds to the development of theoretical sensitivity. This theoretical sensitivity must be complemented by a solid understanding of the goals and assumptions of different methods. Shortly, the choice of method should be based on what the researcher wants to find out, to enrich the understanding of worldviews, and conclusions should be based more on reason than on convention and dogma. In a research area that is so utterly unexplored, reason, intuition, and creativity are absolutely essential for the development of hypotheses and theories. This does not in any way preclude rigor in the reasoning behind, and the testing of, hypotheses and theories. On the contrary, hypotheses that do prove accurate and fruitful and that are backed by cogent reasoning are likely to survive and spawn further research. Secondly, I think that a pluralistic approach would benefit the development of research in this area. There are many different ways to study worldviews and many different aspects of worldviews to study. I find it unlikely that one single perspective will be able to encompass all the important aspects of such an enormously large and complex area, especially in this initial phase. Researchers will probably disagree over which parts of the worldviews or human beings are most important and over how the interrelation of these parts should be described, simply because researchers are also human beings, with different concerns and different worldviews. It is of course possible that powerful overarching perspectives, that embody the consensus of researchers, will develop. But, for the time being, there is a lack of such perspectives. As scientists, we must therefore be open, although critical, to different perspectives and ask ourselves what they may contribute to the area of research in itself, and thereby also to our own understanding of it. If we use these lines of reasoning as guiding principles in our own research we will be able to minimize most of the different forms of selection bias.

Conclusions from the present study

I will begin by looking at the Q-sort worldviews in themselves, and then I will turn the attention to their relations to other variables. Next, I will apply the perspective of the polarity theory on these worldviews and conversely ask what light the worldviews shed on humanism and
normativism. Finally, I will try to integrate all available pieces of the puzzle, including previous research, in trying to create a unified and updated picture of humanism, normativism, and the polarity theory.

*The worldviews.* Can we say that some of the beliefs addressed in this research were more central to the participants’ worldviews than others? We can say that: (1) the participants felt more strongly about certain matters than other, and (2) some of the beliefs tended to differ more between worldviews than others. Because the beliefs that were included in this research are merely a small subset of all the important beliefs in all of the five domains addressed, we cannot say that a certain domain was unimportant for the participants. For example, the fact that the participants did not feel very strongly about the moral issues may have been simply because I failed to include the moral beliefs that were important for them. However, if we turn it around it is quite clear that some of the beliefs were especially central to the participants’ worldviews. This was especially true for ontological beliefs. The participants felt very strongly about endorsing or rejecting the notion of a materialistic universe that is devoid of meaning, and there was a sharp disagreement between different worldviews with regards to this question. Participants also felt quite strongly about matters that concern epistemology and human nature, and there was a strong disagreement between the worldviews about epistemological matters. Although the values were few in number, and not very systematically sampled, it was obvious that the value domain was very diverse if we consider what importance is placed on values in the worldviews. Some values are very important to nearly all participants, some are very important to some participants and very unimportant to others, and values in general are more important to some participants than to others in comparison with the other domains.

Though the focus is here on the worldviews of individuals and on what items are central in their worldviews, it is important to acknowledge that it can be interesting to move the focus back to the items sometimes. An item that is not very potent in describing and differentiating individual’s worldviews, that people simply tend to agree about and not respond strongly too, may be all the more potent in describing the cultural climate. An example from the present study is that the disagreement between the participants regarding morality, that is, the psychologically relevant distinction, was not between principles and consequences, as the history of moral philosophy would suggest, but rather between principles and context-based morality. Another interesting example is that most participants did endorse the theory that human beings do
construct their own inner worlds, what I have called a relativism of perspectives, but they rejected relativism about the truth and moral relativism.

Before addressing the content of the worldviews, I must interject a comment about their structure. I have argued that you can get a fuller understanding of a certain belief, or cluster of beliefs, if you take its relations to other beliefs in the worldview into consideration, a principle safeguarded in Q-methodology. What I considered to be the best conceptualization of these worldviews showed clearly that certain beliefs can reflect different things in different worldviews. For example, a belief in free will may be derived either from a positive view of things in general or from constructivism. Also, the beliefs of a worldview shed light on each other. For example, the pessimistic view of human nature in worldview 2 seems to be linked with the notion that moral self-transcendence is not possible and therefore not desirable, which is linked to a denial of free will in concrete action. But free will in choosing your own perspective seems to be fueled by the strong constructivism. Maybe you want to object that this interdependence occurs merely because the items are too imprecise and include too little contextual specification. Maybe we have to differentiate lots of subtly different forms of beliefs in free will. However, it is easy to see that this will quickly lead the number of beliefs to proliferate into an uncontrollable amount. This is exactly what we can avoid by looking at the Q-gestalt. It is less interesting if we also, theoretically, can describe a worldview as an infinite amount of mutually independent beliefs.

The four main worldviews that I found among the participants showed much clearer patterns of belief than I had dared to expect. Though very complex, they were interpretable. The more participants that were designated as members of a worldview, the clearer the picture that emerged. This is intriguing, because it indicates that you can somehow get a fairly good picture of the core of people’s worldviews if only you have enough participants. If you scrutinize a single person’s worldview it may be hard to interpret all the idiosyncrasies and see the organization behind it, but if you abstract these idiosyncrasies, for example with Q-methodology, it seems possible to find a somewhat organized core. I will return to the implications of this suggestion.

My continuous references to the participants’ worldviews as number one through four have not been due to mere lack of imagination. Rather, I wanted to avoid oversimplifications that may obscure the results. These worldviews are simply too encompassing to straightforwardly be assigned labels. But, at this point, I know enough to make the picture a bit simpler. This is just
what is needed to obtain a good overlook of the worldviews and facilitate communication, though
the reader must keep in mind that it is an oversimplification. I will attempt to label the
worldviews from what appears to be the most important differences to me. Worldview 1 may be
called optimistic anti-materialism. It includes beliefs in anti-materialism and free will,
constructivism, and scepticism about the possibility of certain knowledge without relativism, and
values related to this epistemology, a positive view of human nature, and values that can be
described as intra- and interpersonal humanism. Worldview 2 may be called pessimistic anti-
materialism. It includes beliefs in anti-materialism, constructivism, relativism, and scepticism
about the possibility of certain knowledge, and values related to this epistemology, a pessimistic
view of human nature and of the possibility of moral self-transcendence, a rationalistic and
context-focused moral philosophy, values that can be described as intrapersonal, rather than
interpersonal, humanism. I use the terms optimism and pessimism here in a quite general sense,
to mean a positive or negative view of things in general, not just of future events. Worldview 3
may be called authentic realism. It includes beliefs in materialism and that somewhat certain
knowledge is desirable and possible, albeit difficult, to obtain, a rationalistic and principle-
oriented moral philosophy based on utilitarianism, an acceptance of the alleged dark aspects of
reality, and values that pertain to epistemology, interpersonal humanism and personal
accomplishments. The reason that I call this worldview realistic rather than materialistic is that it
seems to share realistic assumptions about the material world with worldview 4, but not the
general materialism. Worldview 4 may be called inauthentic realism. It includes both
materialistic and anti-materialistic beliefs and a view of knowledge acquisition as a process of
copying reality, rather than constructing it, that enables certain knowledge, and a rationalistic and
principle-oriented moral philosophy based on utilitarianism, a positive view of human nature, a
denial of the possibility of free will, a strategic denial of some aspects of reality and a striving for
inauthentic happiness, along with values that affirm the importance of this striving and some
values with a more interpersonal nature. Why did I not also call worldview 3 and 4 pessimistic
and optimistic, rather than authentic and inauthentic? Because, according to worldview 3,
although the world is not a perfect place, it is possible and desirable to make the world a better
place and to contribute to other people’s lives. Worldview 2 members seem pessimistic about any
such opportunity and instead direct their attention toward coping with their own lives. Moreover,
worldview 4 does not express an authentic form of optimism, but rather it seems that a denial of
any aspect of reality that may cause negative feelings leads to a naïvely positive view of human nature and human beings.

Now let us see what the correlations between the worldviews and other variables tell us. Optimistic anti-materialism was positively correlated with self-description 1. This self-description was strongly defined by satisfaction in life and happiness, general optimism and effective coping strategies, good friendships, and less strongly by having clear goals and a meaning in life, living authentically, and an intellectual striving for knowledge. Pessimistic anti-materialism was positively correlated with self-description 2. This self-description was defined by general confusion and uncertainty, lack of clear goals and a meaningful purpose in life, inauthenticity, unhappiness and pessimism, motivation to think things through a lot with an open mind to understand them, dislike of uncertainty, and good friendships, but also a concern for other people’s evaluation of the self, a feeling of not being accepting, and insecurity in close relationships. Authentic realism was negatively correlated with self-description 3. This self-description is defined by placing a very high value on friends, as well as uncertainty, inauthenticity, preference for structure in life, moderate happiness and optimism, an orientation toward the present moment, and concrete, rather than abstract, thinking. It is important to add that self-descriptions 1 and 3 were related to a positive mood whereas self-description 2 was related to a negative mood. The correlation between self-description 2 and negative affect was especially strong.

The correlations between worldviews and the other variables, presented in table 3, are hard to interpret, because of the large number of variables and the general weakness of the correlations. I believe that this situation is a natural consequence of the complexity and scope of the worldviews that were investigated. Also, the low number of members of inauthentic realism may have made this worldview unreliable, obscuring the relations to other variables. Still there are some clearly discernible patterns that I want to underline. For example, optimistic anti-materialism was not only related to the positive psychological well-being apparent in self-description 1, but some of this general optimism and well-being also seems to be expressed in correlations with mood, personal significance ratings, and parental warmth. Pessimistic anti-materialism, on the other hand, was not only related to negative psychological well-being, but some of its general pessimism and lack of well-being also seems to be expressed in the correlations wth mood, personal significance ratings, voiced criticism, and parental warmth. Some pessimism and lack of
well-being is also hinted in the correlations for authentic realism. Religiosity, in the form of Christianity, was positively correlated with the optimistic rather than the pessimistic form of anti-materialism, and it was negatively correlated with authentic realism. Interestingly, inauthentic realists said that they do believe in something, but not in a specific religion. When it comes to education, the two forms of realism were slightly more positively correlated with the natural sciences and negatively with the social sciences than vice versa. The two forms of anti-materialism were slightly positively correlated with either behavioral sciences or humanistic education, and the optimistic variant was also negatively correlated with natural sciences. It is also noticeable that authentic realism correlated positively with male sex and that Swedish cultural background correlated negatively with pessimistic anti-materialism and positively with inauthentic realism.

**Humanism and normativism.** If we scrutinize Tomkins’ descriptions of humanism and normativism, optimistic anti-materialism seems humanistic and authentic realism seems normativistic, and the other two worldviews look like mixtures of humanism and normativism. The correlations confirm this intuition, which demonstrates convergent validity of humanism and normativism. Optimistic anti-materialism correlated positively with humanism, especially the alternative form of humanism, and negatively with normativism. Authentic realism correlated positively with normativism and negatively with humanism, with the exception of the alternative form of humanism. Moreover, the aggregates of humanism and normativism predictors (sex, education, and political and religious orientation) correlated with the two mentioned worldviews in the same way as did humanism and normativism. The other two worldviews were related to humanism and normativism in more complex ways. Inauthentic realism correlated positively with both humanism and normativism and even with care-oriented humanism on the MPS, but only with classic humanism on the PIQ. It also correlated negatively with alternative humanism. In fact, the regression model in table 6 suggests that the aspects of humanism and normativism that are related to this worldview overlap strongly, because the predictors are not significant. Pessimistic anti-materialism correlated negatively with humanism and the correlation with normativism was also slightly negative. But, there was a tendency for positive correlations with the forms of normativism on the PIQ. It appears that the anti-materialism and the strong constructivism of this worldview pull the correlations with normativism in the negative direction, whereas the pessimistic view of human nature and the deemphasizing of interpersonal matters
pull the correlations in the positive direction. The PIQ is focused on the latter, which explains the positive correlations with normativism on the PIQ. The regression model in table 6 shows that, in combination with humanism, anti-normativism explains more variance of pessimistic anti-materialism than does normativism. This means that there is an overlap between the normativistic and anti-humanistic aspects of this worldview that can be ascribed to the views of human nature and interpersonal matters. The regression models in table 6 also show that care-oriented humanism says something about both forms of anti-materialism that goes beyond the ordinary forms of humanism and normativism. Because the coefficients for care-oriented humanism are actually positive for pessimistic anti-materialism and negative for optimistic anti-materialism, the pessimistic variant must be more humanistic than the optimistic variant in some respect. This must have to do with the fact that the former is relativistic and the latter is not. This makes sense in relation to the interpretation of care-oriented humanism.

So, what does all of this tell us about humanism and normativism? First, I want to note that it is pretty impressive that these four worldviews can be quite readily discriminated from each other with the dimensions of humanism and normativism, despite the fact that they were investigated in an open-ended way independently of the polarity theory. More than half of the participants had a worldview that could be described as purely humanistic or purely normativistic. Second, the different concerns of humanists and normativists now become more and more clear. We have two humanistic worldviews and two anti-humanistic ones, two worldviews that contain anti-normativistic elements and two normativistic worldviews. The two humanistic worldviews share a very positive view of human nature and a strong emphasis on interpersonal values related to humanism. These things seem to be primarily related to humanism, although the interpersonal values also can be derived to some extent from the normativistic components of a worldview, as in the case of authentic realism. But it is likely that these values are held for different reasons and mean different things whether they are derived from humanism or normativism. The main differences between normativistic and anti-normativistic aspects of the worldviews seem related to ontology, epistemology and moral philosophy. Anti-materialism, constructivism, and scepticism about the possibility of certain knowledge seem to lie behind the anti-normativistic elements of the two anti-materialistic worldviews. The two normativistic worldviews share the view that human beings are capable of obtaining unambiguous and certain knowledge, for example by using scientific methods. They also share a rationalistic and principle-based moral philosophy.
of utilitarianism, as opposed to the more situation-based moral philosophies of the anti-normativistic worldviews. But, actually it seems more appropriate to describe normativism in terms of the anti-normativist rejection of normativism. In the regression model in table 5 only the anti-normativistic worldviews contribute unique variance to the prediction of normativism. This means that the anti-normativistic worldviews explain more of the variation in normativism than do the normativistic worldviews. A possible explanation of this is that some persons react strongly to normativism and reject it altogether in a quite uniform way, whereas others reject it less strongly or even agree with some aspects of it in a less uniform way. Analogously, table 4 shows that the optimistic form of anti-materialism, which is purely humanistic and anti-normativistic, does not contribute any unique variance alongside the other worldviews. What it says about humanism is covered by the other worldviews together.

Previous research has consistently shown that people tend to strongly favor humanism over normativism. This has led some researchers to hypothesize that humanism is more politically correct and thus more socially desirable than normativism. Moreover, cultural changes affect what ideologies are available in society. Therefore I included two alternate expressions of humanism and normativism in the PIQ. The alternative form of normativism, based on evolutionary theory and moral contractualism, was a little more popular than the classic form, but not nearly as popular any of the variants of humanism. But, on the other hand, the sample of participants was probably disproportionately humanistic. Perhaps students that are more into the natural sciences would have been more willing to accept the alternative variant of normativism. It is plausible that humanists are more inclined to participate in psychological studies in general. The question as to whether participants in psychological studies tend to be prefer humanism or if people in general prefer humanism remains. But, do Tomkins’ original forms of humanism and normativism differ from the actual humanistic and normativistic worldviews that emerged in this study? The actual humanists in this study do not accept the relativistic aspects of humanism and agree more with the alternative form of humanism than with the original form. The actual normativists tended to be rationalistic rather than empiricistic, acknowledging the role of the mind in constructing knowledge, and they also held many humanistic values. It is possible that the consensual epistemological views within society at large, or at least within science, have changed, thereby causing the normativistic epistemology to change, at least among students,
although it retains some kind of core of beliefs in the efficacy of methods of investigating the material world.

The regression models of humanism and normativism and the remaining correlations may, together with previous research, help to further clarify and unify the picture of humanism of normativism. Humanism correlated with female sex, which replicates a finding from earlier studies, although the effect was especially strong for alternative humanism. It also correlated with religiosity, in the form of Christianity. There were tendencies for positive correlations with social sciences education and negative correlations with natural sciences education as well. Humanists also tended to report a more positive mood, more parental warmth and less parental control, and they voiced more positive criticisms. The correlations with the aggregates of predictors were especially strong for alternative humanism. However, perhaps the most interesting thing here is that humanism generally correlated with higher ratings of personal significance, with the exception of the worldview Q-sort. So, especially the humanists thought that all parts of the study, and the study as a whole, said something important about who they are and what they believe, except for the worldview part. Why is this? A plausible explanation is that humanists dislike the abstract and theoretical reasoning that this part required, because humanism is oriented toward the concrete and practical reality. The regression models in table 4 and 5 confirm that normativism is more related to the worldviews, which are relatively philosophical and abstract, than humanism, because the worldviews explain 45.7% of the variance of normativism as compared to 25.9% of the variance of humanism. Moreover, previous research has rendered a picture of normativists as looking at the world in a distanced and intellectual manner to keep control over social situations, evaluating other people harshly and reacting to them with contempt and disgust. Humanists on the other hand seem more oriented toward the concrete social reality, they let their feelings out, maybe even to the point of regression sometimes, and they often respond to others with social feelings such as joy and shame. Positive affect, female sex, the aggregate of personal significance values, and lack of articulation of political orientation all contribute unique variance to the prediction of humanism, over and above the worldviews, in the final step of the hierarchical regression in table 4. Interestingly, normativism hardly correlated at all with variables such as demographics, mood, and personal significance that lie outside the cluster of central worldview and personal ideology variables. It only correlated positively with the aggregate of normativism predictors and negatively with the humanism predictors, negatively
with humanistic education and education in the behavioral sciences and positively with computer sciences education, and negatively with age.

Now it is time to compare the image of humanism and normativism emerging from the present research with Tomkins’ (1963) original description of the underlying dichotomy of assumptions. We have seen numerous scattered demonstrations of criterion-based validity, such as predictive and convergent validity, and the factor analyses have demonstrated that the data from a large sample can be described sufficiently with a 2-factor model. But what about the content validity? Do these factors correspond to Tomkins’ descriptions of humanism and normativism? The answer appears to be no. Tomkins’ description of the ten basic assumptions of humanism and normativism cannot account for all of the previous research, let alone for the research presented here. This is most apparent on closer scrutiny of the second and third pairs of assumptions. The second pair of assumptions comes from Tomkins’ idea that there is a relationship between seeing human beings as valuable and ascribing them high ontological status. Though such a relationship may hold for normativism, humanism does not seem to be related to ontology at all. The third pair of assumptions corresponds to whether values are seen as a human wish or affect or as existing independently of human beings. In this study, the only worldview that may accept the former view was neither humanistic nor normativistic. Instead of criticizing Tomkins’ description in further depth, I want to suggest a re-conceptualization of humanism and normativism, in order to dissolve the erroneous and misleading dichotomization of humanism and normativism. The models of humanism and normativism that I suggest are more cohesive than Tomkins’ models, because I postulate a core, composed of the most basic beliefs, in each model, rather than a simple list of assumptions. This core of beliefs is expressed in different domains of belief, so that beliefs in these domains are interrelated via the core of beliefs. Moreover, the models that I suggest are much more grounded in empirical data than the original models, thus explaining more of the available data.

Both the factor analyses of the MPS and the Q-sort analysis of the worldviews indicate that there are different variants of humanism. These variants, although different in some important qualities, share the common core of humanism. From the present research, it is possible to discern two variants of humanism that seem to share a terminal value, namely that happiness, presumably for both self and others, is desirable. This value, together with the assumption that it is possible to fulfil it, entails an instrumental value, namely that it is desirable to act so as to
promote happiness. Because this shared core creates an incitement to action, it seems appropriate to think of humanism as an action-oriented dimension. Apart from this common core, the two forms of humanism have different individual cores of belief, that result in different beliefs about what things and events are instrumental in promoting happiness.

The main variant of humanism, studied in previous research and embraced by most participants, includes an optimistic outlook on the world in general and specifically a positive view of human nature. This general optimism seems to extend to beliefs in free will and meaning of life. This core is not very stable though, because it is continuously influenced by external factors. Factors that may be more or less stable or volatile, such as education, religion, psychotherapy, experiences from human interactions especially with significant others, ideo-affective structures, and mood are likely to affect this core. Some of these influences may be bidirectional, for example in the case of mood. There is one main derivate of the positive view of human nature, namely an interpersonal orientation. This orientation is rooted in the belief that interaction with, and compassionate behavior toward, others is desirable. Intuitively, an intrapersonal orientation can also be derived from the positive view of human nature. This orientation is rooted in the belief that it is desirable to look inward and be open to your true feelings and to imagination and mystical experiences, to let the goodness of the authentic self and the world in general emerge. But, the present research indicates that this intrapersonal orientation is more related to anti-normativism than to humanism, because it is absent in one humanistic/normativistic worldview and present in one non-humanistic/anti-normativistic worldview. However, the possibility that this orientation is present in some forms of humanism and missing in others cannot be ruled out. It seems appropriate to be sensitive to the range of humanism, that is, whether it includes both the self and other human beings and perhaps even all living beings. Within the framework of humanism it is possible to claim that the interpersonal and intrapersonal orientations both contribute to either the happiness of the self or the other, or to the happiness of both the self and other, or that the distinction between self and other is irrelevant. Agreeableness, openness and empathy also fit naturally within this framework. A possible component of the interpersonal orientation is a desire to be socially accepted. Negative correlations found between humanism and constructs such as social dominance and authoritarianism may be explained either by such social desirability or by assuming that the
interpersonal orientation incorporates a more democratic stance that focuses on individuals rather than on their place in systems and groups.

Although it is debatable whether the second variant of humanism should be called humanism at all, the important thing is to be clear about the similarities and differences with the main form of humanism. This second variant of humanism is much harder to specify than the first one, both because reliable data are scarce and because these data are hard to interpret. But we can outline a rough structure for the model. The core beliefs are not as optimistic here as in the other variant of humanism. It includes beliefs about human beings being controlled by reality rather than free to control it themselves and about them perceiving reality as it is rather than constructing it from their own perspective. From these beliefs and the core values of humanism, an attempt for a constructive response to the human predicament is derived. This response is to try to maintain an illusion of reality as a conscious strategy, eschewing questions about the true nature of reality and of the inner self and trying to repress cognitions about negative aspects of reality and negative feelings. According to this perspective, although human beings are, in an abstract sense, controlled by reality, they have to turn this into a pragmatic orientation toward action, assuming or even pretending that they can influence the concrete reality. This leads to a rather one-sided focus on positive things, for example maintaining a belief in human nature as altogether good and attempting to suppress any negative aspects of it. This differs from the view professed by most humanists, namely that there are negative aspects of human beings on a concrete level, but on a deeper level a positive potential dwells in the nature of all human beings. Moreover, values are only accepted to the extent that they are directly instrumental in creating happiness. From this, two derivates, that roughly correspond to intrapersonal and interpersonal dimensions of humanism, can be discerned. The first derivate is an interpersonal orientation, which is a result of either the belief that interpersonal behavior directly contributes to the happiness of other human beings or the fact that the pragmatical assumption that human nature is good may make interpersonal interaction desirable. Because of their differing core beliefs, the two variants of humanism may include somewhat different beliefs about what interpersonal actions are desirable. The second derivate is an orientation toward the present moment, trying to make the self experience positive feelings rather than worrying about the past and future, perhaps with an inclination for hedonism. The discovery of the second variant of humanism is intriguing because there is an obvious parallel to defensive self-esteem. Defensive self-esteem can also be construed
as a coping strategy that suppresses certain cognitions. Perhaps some of the humanists that reported the main variant of humanism do in reality have worldviews that contain aspects of defensive humanism, but they are not aware of it or they do not want to admit it. Consequently, the participants that did report using a positive illusion as a coping strategy may ironically be more authentic than participants with other variants of humanism. This creates serious methodological problems. Inferring humanism from behavior is a problematic task, and trying to lure people’s authentic beliefs out by raising their awareness of their own cognitions will at the same time transform their beliefs. In any case, it would require in-depth studies of people’s worldviews to establish a general method of assessing the cognitions or dispositions that create defensiveness in a worldview or to investigate if some already existing measure of defensiveness is adequate. Another possibility is to look at the composition and specific contents of the worldview to find hints of defensiveness. Lastly, a caveat about the qualitative meaning of relatively low levels of humanism is appropriate. What is the negation of humanism? This research indicates that the fact that some worldviews emerge as non-humanistic or even anti-humanistic in statistical analyses may in reality be caused by their absence, or just lesser degree, of humanism, rather than by a rejection of it as in the case of normativism.

Whereas humanism seems to be a somewhat volatile action-oriented aspect of worldviews, normativism seems to manifest a truly robust philosophical foundation of worldviews. The only external variables that are related to normativism, such as age and educational background, pertain to things that occur over long periods of time. Normativism seems so deeply entrenched in the worldview that it resists most outer influences. The most basic fundament of normativism is related to ontology. Normativism seems to be based on the core-belief that the material world has certain somewhat static properties that we can often easily perceive and capture with linguistic classifications. This is in itself consistent with anti-materialism, although normativists tend to be materialists. Postulating static properties in the material world, they may not have much need for an immaterial dimension in which to place such properties. Although materialism is consistent with believing in a meaning of life, the materialism inherent in normativism seems to often appear as a part of worldviews that deny the existence of any ultimate meaning of life. Anti-normativism, on the other hand, seems to be based on the core-belief that the material world is a dynamic flow of events, whose appearance is caused by contextual factors rather than by static properties. This means that contextual factors, such as worldviews and spatiotemporal
location, create the appearance of static objects. Although anti-normativists may admit that some kind of properties really exist, avoiding relativism, these properties are seen as much more specific and dynamic than those that normally appear in human conceptualizations. They see human objectifications of the world as tools for making sense of it. In this sense, anti-normativism incorporates the view that the inner world is a human construction, although it can be constructed in more or less appropriate ways from an external reality. On a more concrete level, anti-normativists believe in the power of context as a strong determinant of how things appear and consequently they focus on the continuous changes in worldly states and events that follow from changes in context. Anti-materialists also tend to believe in a non-material dimension, which may be where they place the meaning of life. Perhaps they perceive this non-material dimension as necessary for preserving some ultimate structure and certainty in the world, or even to preserve a basis for morality as in the case of Kant, and warding off nihilism and relativism. Anyway, from this core of beliefs, we can derive other beliefs in a number of areas, predominantly linked to philosophy.

One obvious derivate is the view of human nature. Normativism represents the view that the actions of human beings express quite stable inner traits and anti-normativism represents the view that human actions are greatly influenced by the context and thus very different in different contexts. From this, we can further derive beliefs about the potential for change and development in human beings. Whereas normativists maintain that human beings have both good and bad qualities that are quite stable, anti-normativists believe that human beings have a great potential to understand why they think, feel, and act like they do in different situations and thus to change the factors that underlie undesirable cognitions, emotions and behaviors. For example, a normativist would normally interpret the occurrence of delinquency and aggression as parts of human nature that are inevitable, or at least very hard to change, whereas an anti-normativist would interpret it as a set of maladaptive reactions and actions that may be changed for the better by understanding the contextual factors that give rise to it and changing these factors. In other words, it is easier to see how a behavior in a specific situation can be changed than too see how a stable personality trait can be changed.

A second derivate from the core of normativistic beliefs concerns moral philosophy. According to normativists, moral principles such as utilitarianism should be generated from careful thinking and thereafter applied to concrete situations. Some of the items on the polarity
scale that are most characteristic of the normativism factor concern concrete moral imperatives. Normativists believe that it takes general toughness and harsh discipline for the self and others to control those static aspects of reality that are bad. That normativists think that things are right and wrong in an objective sense can be explained within a materialistic framework as their feeling that some ways of projecting value onto the world are correct and others are not. Anti-normativists believe that the moral rightness of an action may differ between contexts. This may lead to moral relativism, which means that moral rightness is a relation between an action and a context, or the anti-normativist may claim that if the contexts are identical, or at least similar enough, the same action is always morally right. Contrary to the control and self-discipline advocated by normativists, the anti-normativists tend to believe in spontaneous processes of change and possibly in the ability of human beings to guide the direction of this change rather than controlling it.

A third derive from the normativistic core of beliefs is related to epistemology. According to normativism, the fact that there are static properties makes it in principle possible to obtain certain knowledge about reality from thorough investigation with rational methods. However, according to most normativists this certainty is difficult to obtain, because it is hard to get past flaws and biases in models of reality. According to anti-normativism, certain knowledge, at least about the material world, is impossible to obtain, because it would require knowing everything about an enormous context that is constantly in flux. This leads some anti-normativists to relativism, as they claim that the truth of something is relative to context. Others maintain that truth is a property that stands in some kind of correspondence relation to a mind-independent reality, although this reality does not include static properties.

A fourth derive is cosmological beliefs. Although it seems that normativism is more in line with determinism and anti-normativism with indeterminism, the issue of free will is quite complex. This study did indicate that it may be appropriate to distinguish between beliefs in abstract philosophical free will, free will as freedom to choose inner perspectives and construals of the outer world, and free will as freedom to operate on and change the world. But it did not give a clear answer as to how these variants are related to normativism. What we can say is that normativists tended to deny free will in the abstract sense, probably because were inclined to accept determinism, but they seemed a bit less pessimistic about the more concrete aspects of free will. Perhaps they believe that some of the properties of the concrete reality are possible, albeit
difficult, to change. The anti-normativists, on the other hand, seemed to believe in free will more or less in all of its different forms. This is a natural consequence of a belief in the power of the mind in constructing the outer world, a focus on continuous change, development, and indeterminism, and a belief in an immaterial dimension.

A possible fifth derivate is also worth mentioning, although research that has explicitly addressed it is scarce. The normativistic belief that things in general, and human beings specifically, possess more or less static properties that are valued differently, implies that that things in general, and human beings specifically, have different values. This engenders normativistic hierarchies in which status is defined in terms of possession of certain valuable properties, and it also implies a social dominance orientation if positive and negative properties are ascribed to groups and not just persons. For the anti-normativist, any such stratification of value, at least in the material world, would be context-relative and in that sense arbitrary, because the properties that appear to exist in the material world are in fact dynamic and context-dependent. Thus, within an anti-normativist framework, human beings, and things in general, can only be ascribed different values in relation to a given perspective as a pragmational tool, acknowledging the ultimate arbitrarieness of the ascription. This final derivate plays a prominent role in Tomkins’ theorizing, because it is linked to his explanation of the historical origins of the polarity in thought.

Some of these five dichotomies of belief are not just expressions of the core of beliefs, but also of some of the other dichotomies of belief, that is, the domains are interlinked. For example, a belief in free will in an abstract sense may be an expression of ontology, but free will as freedom of inner perspective and autonomous acting upon the concrete world may be more related to beliefs concerning human nature and epistemology. The values express ontology, because things in general may be valued differently, and beliefs concerning human nature, because human beings specifically may be ascribed different values tied to fixed properties. Beliefs concerning human nature are also expressed in the moral beliefs, because fixed badness in human beings may require moral principles to control. Furthermore, the value dichotomy is expressed in the moral beliefs, because different moral principles may have different fixed values.
Figure 3. *Tentative sketches of the new models of humanism and normativism.*

### Humanism

It is desirable to create happiness for the self and others

**Method to achieve this**

- **Standard humanism**
  - Optimistic outlook things in general and human nature in particular
  - Intrapersonal openness
  - Interpersonal orientation

- **Inauthentic humanism**
  - Human beings are deep down controlled by their environment
  - Positive illusion as a coping strategy
  - Happiness in the present
  - Interpersonal orientation

### Normativism

**Ontology**

- Static versus dynamic material reality

**Epistemology**

- It is possible versus impossible to obtain certain knowledge

**Cosmology**

- Determinism and disbelief in free will versus indeterminism and belief in free will

**Moral philosophy**

- Principle-based versus context-based moral philosophy

**Human nature**

- Fixed properties versus context-dependent and mutable properties

**Values**

- Absolute and norm-based versus relative and flexible hierarchies of value
The strategy that I used to develop these models can be thought of a form of inference to the best explanation, in which I progressively moved toward a level of description that was basic enough to account for essentially all the empirical data. I relied heavily on the Q-methodological analyses and their relationship to the humanism and normativism as well as the unified picture that emerged from all of the correlations and regression models, in trying to elucidate the elements that can truly be ascribed to either construct. The Q-sort worldviews were especially crucial in this process, because they helped to reveal things that the size of correlations between pre-defined questionnaire constructs would not have been sufficient to show. For example, anti-normativism would have correlated strongly with anti-materialism, though it appears that this connection is contingent and that normativism is in reality better described as a set of beliefs about the material world. I concede however that these models remain tentative and speculative, because they are based on a limited sample of empirical data and not yet rigorously tested. But their strength is that they offer an integrated picture that accords well with previous theories and research. For example, the generally positive or negative view of human nature inherent in humanism and the association between this optimism, meaning in life, and feelings of free will has often been implicated in psychological research. Also, almost all of the distinctions in the normativism model have been central in philosophical discourse and the distinctions that pertain to human nature, moral philosophy and epistemology have been central in previous research in psychology and education, and both philosophers and psychologists have emphasized the importance of the static/dynamic modes of human thought. Moreover, the models fit well with Westerlund’s (2001) empirically-derived distinction between abstract philosophical beliefs related mainly to materialism versus spiritualism (closely related to normativism), on the one hand, and the general emotional postures of optimism and pessimism (closely related to humanism), on the other hand.

In fact, the models may also be coherent with Tomkins’ root idea that there is a polarity in human thought, if we apply the polarity to the sharp division between normativism and anti-normativism rather than to normativism and humanism. Whereas humanism seems to be more of a dynamic action-related worldview dimension that varies in strength both between different worldviews and within them at different points in time, normativism seems to be a robust dimension with a sharp division between proponents and dissidents. The division is not perfect,
but it seems appropriate to talk about normativism and anti-normativism. Although proponents of each side of the polarity do share certain fundamental thoughts, there is room for variation and complexity within each side as I have shown, because normativism does not cover all philosophical beliefs.

The usefulness of the new models can also be demonstrated by showing that they can account for the exemplary humanistic and normativistic ideologies that I described earlier. The previous conceptual tools were insufficient for clearly defining existentialism and buddhism in terms of normativism and humanism. These new models show that existentialism is in fact a clear example of a worldview that expresses anti-normativism. Adding a high degree of humanism to the existentialistic perspective will render a worldview close to that of humanistic psychology or to the existentialists who advocated the devotion to such a theory as a constructive response to the existential predicament. Adding a low degree of humanism instead is likely to render a more Schopenhauerian or Nietzschean worldview pervaded with relativism and despair. The diversity within existentialism reflects the plurality of different variants of anti-normativism. Furthermore, buddhism incorporates a high degree of humanism and it is anti-normativistic in all respects except when it comes to prescribing actions. The buddhistic moral philosophy can be understood as the link between the material and the immaterial dimension, that is, the actions are directed at attaining the sphere of absolute truth. So, the alleged normativistic elements of buddhism are related to the sphere of absolute truth. As observed earlier, the construct of normativism seems to deal with beliefs about the material world, so it may be insufficient to capture the whole of philosophies that ascribe the immaterial dimension such ontological priority. Thus, buddhism can properly be thought of as anti-normativistic. Moreover, the normativistic beliefs regarding science do exemplify a combination of normativism with low or moderate degrees of humanism, expressed for example in authentic realism. In sum, these ideologies correspond well with the combinations of normativism and humanism that I have underlined.

Although normativism and humanism deal with different aspects of worldviews, some types of belief are related to both of these concepts, albeit in different ways. Although it is difficult to distinguish what is specifically humanistic and normativistic in these beliefs, the present research has provided some hints. The general optimism of humanism seems to involve feelings of agency and meaning that generalize to beliefs in free will and meaning of life, whereas, in anti-normativism, beliefs in the meaning of life and free will are largely motivated by philosophical
views. More generally, anti-normativism seems to fit extraordinarily well with humanism. The anti-normativistic tenet that static properties are aspects of the human constructions of the world, rather than aspects of the world itself, can be combined with humanism to form the belief that there is an innermost core of reality, encompassing human nature, that is positive. This innermost core is probably often constituted by the immaterial dimension that anti-normativists tend to believe in. Normativism, on the other hand, with its focus on acknowledging both good and bad aspects of reality, implies neither endorsement nor rejection of humanism, but it coheres especially with a level of humanism that is lower than the level of humanism in the synthesis of humanism and anti-normativism.

Humanism and normativism are also related to religious and political beliefs, though these relations may certainly differ between cultures, and empirical evidence is scarce and inconclusive. However, both the present research and de St. Aubin’s (1996) research indicate that religious beliefs are more connected to humanism than to normativism. This may be surprising at first glance, because religious thought certainly involves ontology, which is central in the model of normativism. But, in its present form, the normativism model focuses on the material reality, although it may be expanded in the future. Spiritualism is perfectly compatible with both normativism and anti-normativism. Another possibility is that normativism is more related to the esoteric than the exoteric side of religion, that is, inner experiences and practices rather than commonly held beliefs, dogma, and observable practices, or to the toughminded- versus tendermindedness distinction (see Fontana, 2003). That religiosity is related to high humanism is not surprising, because the content of the humanism model is ubiquitous in religions. De St. Aubin, conducting his studies in a highly religious country, could also differentiate humanistic and non-humanistic forms of religiosity, expressed in immanence versus transcendence of divinity. With regards to politics, it is even harder to delineate implications that hold over cultures, because labels of political orientations mean different things in different societies. But humanism and anti-normativism seem to engender similar political orientations. In the interpersonal orientation of humanism, the focus is on improving the situations of individuals, rather than on the system, which leads to liberalism rather than conservatism. Anti-normativism incorporates a focus on the potential and development of the individual, whereas normativism may focus more on the system that is used to control the bad aspects of reality. Thus, anti-
normativism should lead to liberalism, and normativism may lead to conservatism or some other system-focused ideology depending on societal and cultural factors.

Now we are left with perhaps the most interesting finding of all, namely how humanism and normativism are related to psychological health. In fact, neither humanism nor normativism seem at all related to psychological health – a perplexing conclusion. However, it appears that the focus must be moved from either dimension in isolation of the other to how they are integrated with each other. In the present study, the key was whether anti-normativism was combined with high humanism or low humanism, as the former was related to basically good, and the latter to basically bad, psychological health. That the combination of anti-normativism and humanism is conducive of psychological health is not surprising, because the anti-normativism enables a genuinely positive view of things and a genuine optimism without any conflicts within the worldview. Because normativism entails that there are both good and bad static aspects of reality, combining normativism with viewing the world as basically good would require a positive illusion, which is related to defensiveness and fragility in the worldview. As we have seen, such an illusion is used as a coping strategy by some persons. However, it is when anti-normativism is combined with low humanism that the big problems emerge. Anti-normativists are believe that human beings have a great potential to construct their own world in different ways and that such constructions are partly arbitrary. A positive response to this predicament would lead to a personal convictions and meanings, integrating the anti-normativism with humanism, while acknowledging the ultimate uncertainty of these beliefs. However, some people have not found such a positive response to the existential anguish, by embracing humanism, and end up in relativism, confusion, and despair. The combination of low humanism and anti-normativism seems disastrous. One psychological tension emerges between the belief in possibility and personal potential for development of anti-normativism and the pessimism of low humanism, which combine to imply that human beings fail to use their potential in a good way. Moreover, the fact that anti-normativists often seem to postulate an ultimate nature of the world that is either good or bad leads to even bigger trouble – if things are generally perceived as bad then it is hard to see how this ultimate nature could be good, and believing in the badness of the absolute nature of the world could surely lead to depression, nihilism, and despair. For example, any spiritualist with low humanism would be agonized by religious doubt and uncertainty. Normativism, on the other hand, seems to fit naturally with a moderately low humanism, unless high humanism is
used strategically as a defensive illusion. Acknowledging both positive and negative aspects of existence, it neither leads to optimism nor pessimism. These results suggest that the integration of humanism and normativism, or their psychological substrates, is essential for psychological health.

So where do these conclusions leave Tomkins’ theory? Besides the reconceptualization of humanism and normativism that I have suggested, we have also seen that there may indeed be a pervasive polarity in human thought, contrary to what many researchers after Tomkins have assumed, although it seems to hold between normativism and anti-normativism rather than normativism and humanism. Also, the combination of humanism and normativism seems to be a crucial part of the worldviews of human beings. Humanism and anti-normativism do fit well with each other on a theoretical level, but other possibilities are also prevalent in actual worldviews.

However, Tomkins’ theory does not only deal with the contents of worldviews, but also with their origin. According to him, ideo-affective postures are created through socialization and they lead to the adoption of ideologies that they are ideo-affectively resonant with. Evidence for this theory is quite scarce, although it has been shown that normativism and humanism is related to experiencing different emotions and remembering important life episodes with different emotions. In de St. Aubin’s (1996) study, humanism was related to memories of important life episodes involving joy, sadness, fear, and shame, and normativism was related to such memories involving more anger. It makes sense that the former emotions may arise from an openness to recognize and express feelings and a social orientation. Moreover, a normativist may feel anger because things have the fixed properties that they have, but for an anti-normativist such anger seems pointless as the properties that are ascribed to things depend on context. For example, an anti-normativist would not urge anger against someone who has committed a criminal act, because the behavior is seen as caused by the context rather than by any inherent badness in the person. Moreover, it is intuitively plausible that parenting styles do create certain ingrained modes of thought in human beings that are deeply entrenched in the worldviews. For example, unconditional regard, either in the positive or negative direction, should foster an anti-normativistic belief that value is not contingent on behavior. If this regard is positive it should result in a healthy synthesis of anti-normativism och humanism, but if it is negative the result may be a disastrous clash between low humanism and anti-normativism. Another plausible prediction is that variations in the combination of humanism and normativism in worldviews is
related to attachment in systematic ways. To truly test this part of Tomkins’ theory, we would have to study the development of ideo-affective postures and create some standardized way of measuring them – not only the affects inherent in Tomkins’ theory, but also other groups of affects like the ones that Haidt (2003) outline. This measurement would then be used to predict resonance to all kinds of different theories and ideologies, including the humanism and normativism that Tomkins described.

The four interpretations of the Q-sort worldviews that emerged in this study are quite cohesive and elaborate. I have argued that this is a result of removing the idiosyncrasies in the process of abstraction and reaching the shared core of the worldview, rather than a methodological artifact. This implies that there are some kinds of forms behind the worldviews. Because the worldviews may seem a bit too sophisticated and coherent for ordinary people to hold, it is easy to think that the worldviews are simply assimilated from views that are prevalent in society, claiming that they are, in this sense, social constructions. Do people really have genuine views about for example ontology and epistemology other than what they pick up from the public discourse? It is likely that students pick up ideas about constructivism and relativism without fully understanding their meaning. But, recall that Tomkins’ theory predicts that resonance with, and thus adoption of, different views will result from something within each person, namely ideo-affective structures. The forms may result from suchlike structures that are ingrained in human beings. The robustness of normativism is indeed difficult to explain if you want to claim that worldviews are just reflections of societal discourse. Humanism is probably more liable to be influenced by society and social desirability concerns, but it also seems a bit too general to be explained without appealing at all to universal patterns in human thinking. However, it is important to realize that there are other motives for adopting a pattern of thought than experiencing resonance with it and that the strength of these motives may differ in different situations. One example is social desirability. It is also likely that there are individual differences in the extent to which individuals make their own personal constructions, for example from ideo-affective structures, or assimilate their viewpoints from culture. It is fair to guess that the former approach would create a more cohesive worldview. In Tomkins’ terms, authenticity implies a fit between ideo-affective structures and ideology. And the fact that authenticity is related to psychological health then supports the idea that the cohesiveness of the worldview is related to psychological health. But, claiming that anti-normativism is also related to making personal constructions may be going too
far, because normativists also claim that it is important to create a personal view of the world. Moreover, if individual differences in the sources of beliefs are expressed solely in the contents or structure of the worldview or also in properties of it, such as defensiveness, is yet to be explored.

Directions for further research

Finally, I want to say something about further research in the area, while raising some conceptual and methodological caveats. First off, is the worldview a part of the self or is the self a part of the worldview? There is occasional confusion in the literature of the self as denoting the psychological nature of a person in an objective sense and the self as denoting a set of subjective perceptions, beliefs, feelings, etc. that a person has about himself. In the first sense, I find it more appropriate to use the term personality and to say that the worldview is a central aspect of personality. In the second sense, it is clear that the self-view is a part of the worldview, because the person is a part of the world. Rokeach (1968, 1973) even argued that self-cognitions form the core of the worldview. A second point about conceptualization is that it particularly useful to distinguish between three different levels of worldview analysis: (1) intentional states and events in general, and beliefs in particular, may be regarded as the primitive units of a worldview, (2) we can talk about clusters of these units with a priori categorizations (such as my taxonomy of beliefs concerning metaphysics, epistemology, morality, and so on), often in terms of everyday classifications of ideologies, philosophies, and other systems of thought, (3) we can use psychological theories and research to derive worldview dimensions, such as humanism and normativism, that seem to be especially central in psychological functioning. It is the third type of conceptualizations that are truly useful, although most of the relevant research to date has focused on the second type of classification.

With this in mind, how do we progress with the study of worldviews? A first step is to give a comprehensive and detailed description of the contents and structure of worldviews, with sensitivity to individual differences and cultural variations, as well as similarities and universal elements. But before proceeding, it is important to raise a caveat about the awareness of beliefs. It is beyond doubt that people are not equally aware of all parts of their worldviews. Because of this, investigation of their beliefs may lead them to an increased awareness and elaboration of their beliefs, but it may also lead them to infer beliefs from other parts of the worldview where
they already have elaborate beliefs. Still, certain parts of the worldviews may be concealed for some persons or difficult to express in language. It is possible that special methods will have to be developed to access such parts.

Another interesting area of inquiry concerns why people have the worldviews that they do. What is the reason that people hold certain theories? How do they judge different theories? How do they respond to arguments for different theories? Do certain people with certain traits or worldviews tend to accept certain arguments? We know that people need to feel that there is at least some rational basis for believing in something, but how does this basis differ with regards to personality and culture? Does it include proneness to be influenced by logical fallacies such as overgeneralization and equivocation or defense mechanisms such as projection and rationalization? How is this related to the contents, structure, or evolutionary functional basis of worldviews? What role do aspects of the situation and personality play in affecting whether the beliefs are more or less constructed online or retrieved from memory? Are the expressions of different beliefs differentially affected by aspects of the situation for different persons? How is this related to common concepts in psychology, such as self-related concepts, for example self-esteem and defensiveness, and cognitive styles, for example need for cognition and need for closure? There are a lot of questions in this area and a lot of synthesis to be done in order to integrate this area with what we know from social psychological research.

Another important area is the relationship of worldviews to psychological adaption, health and functioning. The present research suggests that to investigate relationships between worldviews and psychological health you may need to consider the structure and integration of important aspects of the worldviews, rather than mere contents. But this area can be expanded so as to deal not only with conflicts within worldviews, but also with conflicts between different worldviews held by different persons. As Koltko-Rivera has pointed out, the study of worldviews may help us to understand how to resolve conflicts that are caused by a clash of different worldviews, and it may thereby play a part in the positive psychology movement. We may for example ask: In what ways can we build positive beliefs and how is this related to positive strengths? How does this contribute to self-actualization and health?

A particularly fundamental question is how worldviews are related to other aspects of personality, such as experience and behavior. For example, are dimensions such as humanism and normativism related to different ways of experiencing and behaving? Although this area is
largely unexplored, the worldview theorist may find pieces to the complex puzzle in very
different parts of psychology. For example, relationships to experience and behavior have been
explored in depth in the cases of religious beliefs in the psychology of religion (Fontana, 2003;
Forman, 2004), epistemological beliefs in research on education (Schommer et al., 1997;
Brownlee, 2002), and Tomkinsian (Carlson & Carlson, 1984; Carlson & Levy, 1970) personal
ideologies.

Finally, the concept of worldview is relevant to philosophical issues about truth and
knowledge acquisition. Worldviews are undoubtedly affected by the way that the world is.
Disbelievers in a mind-independent reality will even equate worldviews with the world. Those
who do on the other hand postulate a mind-independent reality may regard the development of a
worldview as a mapping of the world, where some aspects of the map may be more or less
correct or more or less useful, and it may be distorted by systematic bias. Experience does not by
itself lead to beliefs, but it may develop into beliefs that, in some sense, fit with, and are
integrated into, the worldview. So worldviews are relevant to the explanation of belief
acquisition, the correctness of beliefs, and justification. What role do properties of worldviews
such as contents and structure play in the process of mapping the world? If we can explain how
worldviews tend to develop then we may understand more about the world that they can be said
to map. Moreover, the central position of worldviews, or paradigms, in contemporary philosophy
of science indicates that the worldview construct is important in explaining the progress of
science. Related to these issues is the question of whether more correct beliefs are more useful,
adaptive, and conducive of psychological health. This is controversial in psychology. Some
psychologists claim that a positive illusion can be adaptive and others claim that it leads to
fragility and defensiveness.

These different areas of inquiry may be pursued quite independently of each other,
accommodating my claim that a plurality of perspectives enhances progress in our understanding
of worldviews. Although the goal may be to investigate beliefs that are so fundamental that they
are more or less relevant for all human beings, the sheer vastness and complexity of such a
fundament makes it unlikely that one theory will account for all of it, at least initially. Moreover,
although unification is indeed desirable, if possible, there must be something to unify first. A
grand worldview model is yet far out of sight.
I hope that I have been able to show with the research and arguments that I have presented in this essay that research on worldviews is both useful to psychology and fascinating. I suspect that residual doubts about the legitimacy of the worldview construct and about the possibility of rigorous worldview research stem from the historical background of science. Psychologists generally want to be able to operationalize their concepts, or at least reduce them to other operationalized concepts, in order to be able to investigate them objectively. This is not possible with the worldview concept as I have defined it. Indeed, the sheer scope and complexity of worldviews can be intimidating, and it can be hard to see how it is at all possible to investigate them objectively. But, as I have argued, the worldview concept is a theoretical concept whose primary function is to organize other concepts and provide a framework for explaining and understanding worldviews. What we can try operationalize or investigate in other ways is always a specific aspect of a worldview; not an entire worldview. Such aspects can be studied in the same way as psychologists everywhere study consciousness as it is manifested in actions and self-reports. Such worldview investigations are in fact epistemically superior to the ubiquitous strategy of inferring traits from self-reports (see p. 8).

Developing a worldview psychology is indeed a project of daunting complexity. But creativity, curiosity, ingenuity, and careful reasoning will help us to find underlying patterns of order in the chaos of worldview phenomena, just like it has done in so many other areas of science before.
References


Chalmers, A. F. (1994). *What is this thing called science?* Falun: Nya Doxa AB.


### Appendix A

**Self-descriptions Q-sample**

<table>
<thead>
<tr>
<th>Item</th>
<th>Self View 1</th>
<th>Self View 2</th>
<th>Self View 3</th>
<th>Self View 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would prefer a task that’s intellectually demanding, difficult and important above one that isn’t as important but demands less thinking.</td>
<td>0.82</td>
<td>1.71</td>
<td>0.10</td>
<td>0.94</td>
</tr>
<tr>
<td>For me it’s enough that something works as it is supposed to. I don’t care about how or why it works.</td>
<td>-0.80</td>
<td>-1.32</td>
<td>0.22</td>
<td>-0.59</td>
</tr>
<tr>
<td>Even if I have decided about something, I’m still willing to consider someone else’s opinion.</td>
<td>0.56</td>
<td>0.89</td>
<td>1.16</td>
<td>0.24</td>
</tr>
<tr>
<td>I don’t like situations that are uncertain so that you don’t know what to expect.</td>
<td>-0.41</td>
<td>0.66</td>
<td>0.06</td>
<td>0.22</td>
</tr>
<tr>
<td>I usually postpone important decisions for as long as possible.</td>
<td>-0.44</td>
<td>1.21</td>
<td>-1.61</td>
<td>0.68</td>
</tr>
<tr>
<td>In considering most conflict situations I can usually see how but sides can be right.</td>
<td>1.09</td>
<td>1.54</td>
<td>0.40</td>
<td>1.80</td>
</tr>
<tr>
<td>I like to have well structured life with regular routines. It helps me to get more out of life.</td>
<td>-0.42</td>
<td>-0.24</td>
<td>0.91</td>
<td>0.61</td>
</tr>
<tr>
<td>I would prefer getting bad news over living in uncertainty.</td>
<td>1.11</td>
<td>0.91</td>
<td>0.13</td>
<td>0.30</td>
</tr>
<tr>
<td>I prefer considering concrete examples above thinking abstractly.</td>
<td>-0.66</td>
<td>-0.68</td>
<td>0.42</td>
<td>0.25</td>
</tr>
<tr>
<td>I often think things through thoroughly and weight pros and cons carefully.</td>
<td>0.58</td>
<td>1.05</td>
<td>-0.07</td>
<td>1.45</td>
</tr>
<tr>
<td>I’m satisfied with my life and feel positive and optimistic about life in general.</td>
<td>1.40</td>
<td>-1.13</td>
<td>0.67</td>
<td>0.88</td>
</tr>
<tr>
<td>I’m satisfied with being exactly the person that I am.</td>
<td>1.55</td>
<td>-0.59</td>
<td>0.84</td>
<td>-0.23</td>
</tr>
<tr>
<td>I often feel helpless in face of the difficulties of my life and I easily eat up myself about my problems.</td>
<td>-1.15</td>
<td>0.88</td>
<td>-0.67</td>
<td>-1.12</td>
</tr>
<tr>
<td>I seldom worry about what other people will think about me.</td>
<td>0.17</td>
<td>-0.99</td>
<td>-0.04</td>
<td>-1.05</td>
</tr>
<tr>
<td>I feel hopeful about the future and my possibilities to get what I want from my life.</td>
<td>1.50</td>
<td>-0.90</td>
<td>0.46</td>
<td>0.79</td>
</tr>
<tr>
<td>There are good people around me that understand my views and thoughts.</td>
<td>1.19</td>
<td>0.22</td>
<td>1.73</td>
<td>-0.01</td>
</tr>
<tr>
<td>I have big problems getting new friends and keeping the ones that I have.</td>
<td>-1.49</td>
<td>-1.18</td>
<td>-1.43</td>
<td>-0.45</td>
</tr>
<tr>
<td>Statement</td>
<td>Score</td>
<td>Score</td>
<td>Score</td>
<td>Score</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>I have good friends that I can trust and turn to in times of trouble.</td>
<td>1.20</td>
<td>0.70</td>
<td>1.93</td>
<td>0.63</td>
</tr>
<tr>
<td>I feel needed and important to others and they accept me exactly the way I am.</td>
<td>0.87</td>
<td>-0.86</td>
<td>1.43</td>
<td>0.63</td>
</tr>
<tr>
<td>I never feel completely confident in a close relationship.</td>
<td>-1.15</td>
<td>0.85</td>
<td>0.22</td>
<td>-1.00</td>
</tr>
<tr>
<td>I have problems understanding why people feel as they do.</td>
<td>-1.26</td>
<td>-1.36</td>
<td>-1.56</td>
<td>-0.73</td>
</tr>
<tr>
<td>Death fills me with terror and I feel unprepared for my own death.</td>
<td>-0.76</td>
<td>-0.18</td>
<td>0.64</td>
<td>-2.05</td>
</tr>
<tr>
<td>I’m aware of when I don’t display my true self to other people.</td>
<td>0.79</td>
<td>0.52</td>
<td>0.11</td>
<td>1.42</td>
</tr>
<tr>
<td>I’m willing to wear the right social mask at the right social occasion if it will get me what I want.</td>
<td>-0.25</td>
<td>-0.44</td>
<td>0.12</td>
<td>0.76</td>
</tr>
<tr>
<td>People that are close to me would be shocked and surprised if they knew what I hide inside of myself.</td>
<td>-0.61</td>
<td>0.84</td>
<td>-1.35</td>
<td>-0.45</td>
</tr>
<tr>
<td>I live my life exactly the way I feel I want to and should deep down.</td>
<td>0.53</td>
<td>-1.67</td>
<td>-0.54</td>
<td>-0.79</td>
</tr>
<tr>
<td>I have trouble focusing on what happens in the present moment. I’m often occupied thinking about the future or the past.</td>
<td>-0.08</td>
<td>1.46</td>
<td>-0.89</td>
<td>0.00</td>
</tr>
<tr>
<td>Sometimes I feel confused and uncertain about what I want to do with my life. I feel uncertain about who I really am and I wonder if I’m becoming the person I want to be.</td>
<td>-0.67</td>
<td>1.31</td>
<td>1.27</td>
<td>1.64</td>
</tr>
<tr>
<td>I feel that I live fully. I do things that are exciting and important to me very day, which gives me a deep satisfaction.</td>
<td>0.45</td>
<td>-1.23</td>
<td>-0.88</td>
<td>-1.15</td>
</tr>
<tr>
<td>I have very mixed thoughts and feelings and I’m often uncertain about what I really think and feel.</td>
<td>-0.73</td>
<td>0.92</td>
<td>0.42</td>
<td>-0.26</td>
</tr>
<tr>
<td>I often have the feeling that there is little meaning in human relationships and things you do in everyday life.</td>
<td>-1.29</td>
<td>-0.52</td>
<td>-1.53</td>
<td>-0.24</td>
</tr>
<tr>
<td>I have clear goals in life and a meaningful purpose to life for.</td>
<td>0.99</td>
<td>-1.45</td>
<td>0.26</td>
<td>0.46</td>
</tr>
<tr>
<td>My life is empty, meaningless and filled with despair.</td>
<td>-1.91</td>
<td>0.30</td>
<td>-1.64</td>
<td>-1.99</td>
</tr>
<tr>
<td>I seldom feel lonely. I enjoy being by myself and relaxing.</td>
<td>0.81</td>
<td>-0.23</td>
<td>-0.29</td>
<td>-1.38</td>
</tr>
<tr>
<td>I would change many things in my past if I could.</td>
<td>0.15</td>
<td>-0.79</td>
<td>0.74</td>
<td>1.14</td>
</tr>
</tbody>
</table>
I’m bitter because life has treated me unfairly. I have worked hard and I have been good, but I have received little in return.

<table>
<thead>
<tr>
<th>Item</th>
<th>Worldview 1</th>
<th>Worldview 2</th>
<th>Worldview 3</th>
<th>Worldview 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>All knowledge is based on experience and observation. Theories are by themselves only meaningless abstractions.</td>
<td>-0.96</td>
<td>-1.41</td>
<td>-1.80</td>
<td>0.53</td>
</tr>
<tr>
<td>With understanding and clear, logical thinking you can solve almost any problem and increase your control over events.</td>
<td>-0.34</td>
<td>-0.44</td>
<td>0.68</td>
<td>-0.41</td>
</tr>
<tr>
<td>Science will eventually give us answers to almost all the important questions we have.</td>
<td>-1.72</td>
<td>-1.50</td>
<td>-0.03</td>
<td>0.15</td>
</tr>
<tr>
<td>Disciplines where you can’t find clear and unambiguous answers are worth less than disciplines where you can find them.</td>
<td>-1.66</td>
<td>-1.56</td>
<td>0.63</td>
<td>0.54</td>
</tr>
<tr>
<td>You should be as critical and questioning towards authorities as everyone else.</td>
<td>1.28</td>
<td>1.89</td>
<td>2.01</td>
<td>-1.02</td>
</tr>
<tr>
<td>You learn the most when you try to create your own view or to figure out how something works by yourself.</td>
<td>0.80</td>
<td>1.37</td>
<td>1.81</td>
<td>-0.40</td>
</tr>
<tr>
<td>Most problems have one best solution regardless of how difficult they are.</td>
<td>0.02</td>
<td>-0.41</td>
<td>0.29</td>
<td>0.53</td>
</tr>
<tr>
<td>The main purpose with science should be to discover the nature of the world we live in rather than creating practical applications.</td>
<td>-0.51</td>
<td>-0.51</td>
<td>0.21</td>
<td>-0.02</td>
</tr>
<tr>
<td>Our thoughts and feelings create the world which we live in.</td>
<td>1.22</td>
<td>1.40</td>
<td>-0.78</td>
<td>0.09</td>
</tr>
<tr>
<td>There is a rational explanation to everything since events are produced in accord with the laws of physics.</td>
<td>-1.43</td>
<td>-0.99</td>
<td>0.82</td>
<td>-0.81</td>
</tr>
<tr>
<td>The world is basically made of solid and indivisible particles and nothing else.</td>
<td>-1.25</td>
<td>-0.78</td>
<td>1.00</td>
<td>-1.39</td>
</tr>
<tr>
<td>Human consciousness and behaviour can be fully explained by electrochemical reactions in the brain and the nervous system.</td>
<td>-1.69</td>
<td>-0.86</td>
<td>0.70</td>
<td>0.37</td>
</tr>
<tr>
<td>There are higher powers in the universe that cannot be explained by scientific methods.</td>
<td>0.84</td>
<td>-0.46</td>
<td>-2.04</td>
<td>-0.13</td>
</tr>
<tr>
<td>There is not ultimate right or wrong. Everything is true in relation to some perspectives and false in relation to others.</td>
<td>0.00</td>
<td>1.60</td>
<td>-0.47</td>
<td>-0.36</td>
</tr>
<tr>
<td>You should act on moral principles rather than to follow temptations and impulses in the moment.</td>
<td>-0.19</td>
<td>-0.84</td>
<td>0.86</td>
<td>2.07</td>
</tr>
</tbody>
</table>
People should let themselves be more controlled by feelings and less by rules and principles.

Because we are all different and that everything changes there can’t be any moral truths that hold in all societies and times.

The solution to almost every human problem should be based on the situation, not on some general moral rule.

We should always try to act so that our actions produce the best possible consequences, regardless of whether we violate any rules, duties or principles.

It’s impossible to care about all human beings, let alone all living creatures. But to people that you are close to you should be loving, loyal and faithful.

There is no fixed basic human nature. It’s completely up to each and everyone to become the person you want to become. We are free to choose our own character and meaning in life.

Anger, violence and aggression arise when needs for e.g. love and warmth are not satisfied, and are not a part of the basic human nature.

Man has needs and instincts which make him basically an egoistic and aggressive being.

Everything human beings do is deep down because we believe we benefit from it. Even love is really nothing more than self-interest.

The basic force within us all is to develop into loving and compassionate beings, which can flourish if the environment permits it.

Most people pretend to care more about each other than they really do and they would take advantage of each other if given the chance.

Most people claim that they have standards of honest and morals, but few people behave in accord with them when the chips are down.

Human beings are basically very similar.

Most people would stick to their opinion and express it even it other people don’t agree.

Most people understand their own strengths and weaknesses and why they behave as they do.

You can get a good view of what a human is like through a short conversation.

You should let reason be controlled by the heart.

Man is not at all free to make all choices, rather he is completely bound by limits of inheritance and environment. Random events have a lot of

| People should let themselves be more controlled by feelings and less by rules and principles. | 0.25 | 0.27 | -0.87 | -1.02 |
| Because we are all different and that everything changes there can’t be any moral truths that hold in all societies and times. | -0.47 | 0.96 | -0.26 | -0.42 |
| The solution to almost every human problem should be based on the situation, not on some general moral rule. | 0.18 | 0.97 | 0.09 | 0.52 |
| We should always try to act so that our actions produce the best possible consequences, regardless of whether we violate any rules, duties or principles. | 0.17 | -0.06 | 1.09 | 1.20 |
| It’s impossible to care about all human beings, let alone all living creatures. But to people that you are close to you should be loving, loyal and faithful. | -0.42 | 1.31 | -0.43 | 1.23 |
| There is no fixed basic human nature. It’s completely up to each and everyone to become the person you want to become. We are free to choose our own character and meaning in life. | 0.44 | -1.17 | -0.77 | -0.98 |
| Anger, violence and aggression arise when needs for e.g. love and warmth are not satisfied, and are not a part of the basic human nature. | 0.69 | -0.57 | -0.29 | 1.08 |
| Man has needs and instincts which make him basically an egoistic and aggressive being. | -1.56 | -0.37 | -0.70 | -1.00 |
| Everything human beings do is deep down because we believe we benefit from it. Even love is really nothing more than self-interest. | -1.29 | 0.62 | -0.55 | -0.09 |
| The basic force within us all is to develop into loving and compassionate beings, which can flourish if the environment permits it. | 0.95 | -0.92 | -0.76 | 1.04 |
| Most people pretend to care more about each other than they really do and they would take advantage of each other if given the chance. | -1.21 | 0.61 | 0.23 | -0.11 |
| Most people claim that they have standards of honest and morals, but few people behave in accord with them when the chips are down. | -0.11 | 1.42 | 0.63 | -0.01 |
| Human beings are basically very similar. | 0.28 | 0.00 | -0.29 | 0.76 |
| Most people would stick to their opinion and express it even it other people don’t agree. | -1.07 | -1.73 | -2.08 | -1.21 |
| Most people understand their own strengths and weaknesses and why they behave as they do. | -0.75 | -2.13 | -1.32 | -1.55 |
| You can get a good view of what a human is like through a short conversation. | -1.18 | -1.30 | -1.24 | -1.95 |
| You should let reason be controlled by the heart. | -0.06 | -0.81 | -0.92 | -1.18 |
| Man is not at all free to make all choices, rather he is completely bound by limits of inheritance and environment. Random events have a lot of | -1.04 | 0.12 | 0.58 | 1.14 |
We create our own destiny and we have full responsibility for all our actions.

<table>
<thead>
<tr>
<th>Rating</th>
<th>22</th>
<th>41</th>
<th>31</th>
<th>52</th>
</tr>
</thead>
</table>

If you’re determined to do something and work hard to achieve it, you can do almost anything.

<table>
<thead>
<tr>
<th>Rating</th>
<th>1.27</th>
<th>0.36</th>
<th>-0.09</th>
<th>0.40</th>
</tr>
</thead>
</table>

How happy you basically are is not at all determined by external circumstances, but rather by how we look upon these.

<table>
<thead>
<tr>
<th>Rating</th>
<th>1.16</th>
<th>0.85</th>
<th>0.27</th>
<th>-1.32</th>
</tr>
</thead>
</table>

To be happy is more important than knowing the truth about things. Sometimes it can be necessary to close your eyes to certain things to be happy.

<table>
<thead>
<tr>
<th>Rating</th>
<th>-0.81</th>
<th>-0.18</th>
<th>-1.02</th>
<th>1.21</th>
</tr>
</thead>
</table>

I think that there is some ultimate meaning of the life of human beings (for example being happy or reproducing your genes).

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.85</th>
<th>0.00</th>
<th>-1.98</th>
<th>0.36</th>
</tr>
</thead>
</table>

Some negative feelings, like for example anguish, are a natural and inevitable part of life. We should accept them instead of trying to eliminate them since they help us to grow as human beings.

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.25</th>
<th>0.24</th>
<th>1.04</th>
<th>-0.96</th>
</tr>
</thead>
</table>

It’s important to think about questions like who you are and why you are here.

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.68</th>
<th>0.51</th>
<th>0.45</th>
<th>-0.64</th>
</tr>
</thead>
</table>

It's important to be aware of your own true feelings even if they are unpleasant.

<table>
<thead>
<tr>
<th>Rating</th>
<th>1.25</th>
<th>1.50</th>
<th>1.05</th>
<th>-0.52</th>
</tr>
</thead>
</table>

It’s important to think independently, to say what you think and to stand firm to it regardless of what others think.

<table>
<thead>
<tr>
<th>Rating</th>
<th>1.31</th>
<th>1.17</th>
<th>1.84</th>
<th>-0.81</th>
</tr>
</thead>
</table>

It’s important to be understanding, helpful, tolerant and forgiving.

<table>
<thead>
<tr>
<th>Rating</th>
<th>1.59</th>
<th>1.11</th>
<th>1.52</th>
<th>1.66</th>
</tr>
</thead>
</table>

It’s important to be self-disciplined, conscientious and competent.

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.16</th>
<th>-0.04</th>
<th>0.74</th>
<th>0.21</th>
</tr>
</thead>
</table>

It’s important to strive for peace and equality in the world.

<table>
<thead>
<tr>
<th>Rating</th>
<th>1.93</th>
<th>0.71</th>
<th>2.24</th>
<th>1.18</th>
</tr>
</thead>
</table>

It’s important to get the respect and the recognition that you deserve.

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.91</th>
<th>0.79</th>
<th>0.49</th>
<th>1.09</th>
</tr>
</thead>
</table>

It’s important to experience and to create beauty.

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.55</th>
<th>-0.10</th>
<th>-0.19</th>
<th>-0.83</th>
</tr>
</thead>
</table>

It’s important to act in a decent and proper way not to make other people angry.

<table>
<thead>
<tr>
<th>Rating</th>
<th>-0.97</th>
<th>-1.01</th>
<th>-0.60</th>
<th>2.29</th>
</tr>
</thead>
</table>

Reaching a sense of inner peace is more important than experiencing passion and temporary highs.

<table>
<thead>
<tr>
<th>Rating</th>
<th>0.34</th>
<th>0.23</th>
<th>0.33</th>
<th>0.66</th>
</tr>
</thead>
</table>

It’s important not to be too closed in your own beliefs so that you can grow and change.
| Note: These tables contain all of the items used in the Q-samples, and the values that each factor have for every item. The items have translated from Swedish, which is the language they were presented in to participants in this study. A positive value indicates relatively more agreement, and a negative value indicates more disagreement. The number written below each value is a rank-ordering of the agreement to the items, so that 1 marks the item with the highest agreement. |
Appendix B

The Modified Polarity Scale (MPS), from De St. Aubin (1996).

Instructions: Consider each of the following statements and mark your agreement or disagreement with each. For each item, please circle the number that best corresponds to your agreement or disagreement.

1. The maintenance of law and order is the most important duty of any government.
2. To assume that most people are well-meaning brings out the best in others.
3. Parents should first of all be gentle with children.
4. Children must be loved so that they can grow up to be fine adults.
5. What children demand should be of little consequence to their parents.
6. When people are in trouble, they should help themselves and not depend on others.
7. Competition brings out the best in human beings.
8. The most important characteristic of friends is that they are worthy of our admiration and respect.
9. The most important thing in the world is to know yourself and be yourself.
10. The main purpose of education should be to enable the young to discover and create novelty.
11. Juvenile delinquency is simply a reflection of the basic evil in human beings. It has always existed in the past and it always will.
12. When you face death you learn how basically insignificant you are.
13. The most important thing in science is to be right and to make as few errors as possible.
14. Great achievements require first of all great imagination.
15. If human beings were really honest with each other, there would be a lot more antipathy and enmity in the world.
16. The beauty of theorizing is that it has made it possible to invent things which otherwise never would have existed.
17. Imagination leads people into self-deception and delusions.
18. Thinking is responsible for all discovery and invention.
19. Observing the world accurately enables human beings to separate reality from imagination.
20. Fear can make the bravest person tremble. We should not condemn a failure of nerve.
21. When a person feels sorry for himself, he really needs more sympathy from others.
22. Some people can only be changed by humiliating them.
23. No one has the right to threaten or punish another person.
24. Human beings are basically evil.
25. Those who err should be forgiven.
26. Anger should be directed against the oppressors of mankind.
27. Familiarity, like absence, makes the heart grow fonder.
28. You cannot understand another human being until you have achieved some distance from that person.
29. Reason is the chief means by which human beings make great discoveries.
30. The changeableness of human feelings is a weakness in human beings.
31. Human beings should be loved at all times, because they want and need to be loved.
32. There are a great many things in the world which are good for human beings and which satisfy them in different ways. This makes the world an exciting place and enriches the lives of human beings.
33. Children should be seen and not heard.
34. In order to live a good life you must act like a good person, i.e. observe the rules of morality.
35. Mystical experiences may be sources of insight into the nature of reality.
36. You must always leave yourself open to your own feelings—alien as they may sometimes seem.
37. To act on impulse is to act childishly.
38. Human beings should be treated with respect at all times.
39. There is no surer road to insanity than surrender to the feelings, particularly those which are alien to the self.
40. The mind is like a lamp which illuminates whatever it shines on.
41. Promotion of the welfare of the people is the most important function of a government.
42. To assume that most people are well-meaning is asking for trouble.
43. Parents should first of all be firm with children.
44. Children must be taught how to act so that they can grow up to be fine adults.
45. What children demand, parents should take seriously and try to satisfy.
46. When people are in trouble, they need help and should be helped.
47. Competition brings out the worst in people.
48. The most important characteristic of friends is that they are warm and responsive to one.
49. The most important thing in the world is to try to live up to the highest standards.
50. The main purpose of education should be to teach the young the wisdom of the remote and recent past.
51. Juvenile delinquency is due to factors we do not understand. When we do understand these we will be able to prevent it in the future.
52. When you face death, you learn who you really are and how much you loved life.
53. The important thing in science is to strike out into the unknown--right or wrong.
54. Great achievements require first of all severe self-discipline.
55. If human beings were really honest with each other, there would be a lot more sympathy and friendship in the world.
56. The trouble with theorizing is that it leads people away from the facts and substitutes opinions for truth.
57. Imagination frees people from the dull routines of life.
58. Thinking keeps people on the straight and narrow.
59. Observing the world accurately provides a human being with constant excitement and novelty.
60. Cowardice is despicable and in a soldier should be severely punished.
61. When a person feels sorry for himself, he really should feel ashamed of himself.
62. No one has the right to humiliate another person.
63. Some people respond only to punishment or the threat of punishment.
64. Human beings are basically good.
65. Those who err should be corrected.
66. Anger should be directed against those revolutionaries who undermine law and order.
67. Familiarity breeds contempt.
68. You cannot understand another human being unless you have loved and been intimate with that person.
69. Reason has to be continually disciplined and corrected by reality and hard facts.
70. The changeableness of human feelings makes life more interesting.
71. Human beings should be loved only if they have acted so that they deserve to be loved.
72. There are a great many things which attract human beings. Some of them are proper, but many are bad for human beings, and some are very degrading.
73. Children are entirely delightful.
74. In order to live a good life you must satisfy both yourself and others.
75. So-called mystical experiences have most often been a source of delusion.
76. If sanity is to be preserved, you must guard yourself against the intrusion of feelings which are alien to your nature.
77. To act on impulse occasionally makes life more interesting.
78. Human beings should be treated with respect only when they deserve respect.
79. There is a unique avenue to reality through the feelings, even when they seem alien.
80. The mind is like a mirror which reflects whatever strikes it.

Note: In his appendix in the original article, De St. Aubin (1996) by mistake presented the 5-point response option as 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree, humanism was computed as the sum of the normativism items, and normativism was computed as the sum of the humanism items. Through personal communication with De St. Aubin I have verified that this was indeed an error. The response option that normally should be used is 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree. Normativism is computed as the sum of items 1, 5, 6, 7, 8, 11, 12, 13, 15, 17, 19, 22, 24, 28, 30, 33, 34, 37, 39, 42, 43, 44, 49, 50, 54, 56, 58, 60, 61, 63, 65, 66, 67, 69, 71, 72, 75, 76, 78, and 80. Humanism is computed as the sum of items 2, 3, 4, 9, 10, 14, 16, 18, 20, 21, 23, 25, 26, 27, 29, 31, 32, 35, 36, 38, 40, 41, 45, 46, 47, 48, 51, 52, 53, 55, 57, 59, 62, 64, 68, 70, 73, 74, 77, and 79. The care-oriented humanism factor that emerged in this study contained items 18, 20, 21, 23, 25, 26, 46, 47, 48, and 51.
Appendix C

The Personal Ideologies Questionnaire (PIQ).

Below are four brief descriptions of different worldviews. Answer on the scale from 1 to 7 how much you agree with the description. 1 means that you don’t agree at all, and 7 means that you agree completely. Answer them one at a time and try to judge the description you are reading independently of the others. There is nothing wrong with thinking that man is both good and evil at the same time or neither good nor bad, or to answer 1 to all four descriptions. The important thing is the overall impression, not the specific statements that are included in each description. Try to think about how much you really agree with a certain description rather than trying to figure out which one is the most correct.

1. Man is basically primitive, selfish and evil. People are most of the time untrustworthy and try to take advantage of each other. The hard facts are that some people are worth more than others and deserve a higher status, for example by being more useful to society. Denying this would be hypocrisy. It’s important to respect authorities and to express admiration and respect for important persons. Competition is a natural part of society. Our feelings are unstable and unreliable and should be controlled by reason. Through self-control we can protect ourselves from damaging feelings and follow the norms and laws that we must have, in order to have a working society. It’s important to strive for social recognition by being polite, orderly, self-disciplined and efficient in what you do.

   1                       2                       3                       4                       5                       6                       7

2. Man is basically good and compassionate. People are most of the time trustworthy and helpful. Even if human beings have flaws and weaknesses we should accept these and forgive mistakes. All human beings are basically equal in worth and everyone deserves to be respected and loved. You should be open and tolerant to people and accept them as they are. Cooperation is more important than competition. It’s important to look inside of yourself to understand and accept the feelings you experience, in order to follow your inner nature. It’s important to appreciate all the beauty there is in the world, both the beauty in our experiences and the beauty in all the wonderful creations that bear witness of the creativity of man.

   1                       2                       3                       4                       5                       6                       7

3. Man should be recognised as the egoistic and aggressive animal that he deep down is. Our behaviour is basically controlled by fundamental biological needs which are a result of our struggle for survival and reproduction. In order to have a civilised society man must be tamed by morals, norms and laws. Moral behaviour emerges within a group because it’s to the benefit of all its members. Even when we show compassion this is on a deeper level really self interest. Being a group animal it’s natural that a hierarchy emerges, where some people are stronger and some are weaker. Some are simply more fit to reproduce their genes and we shouldn’t ignore this fact by pretending that all human beings are equal. Conflicts, striving for status and power and destructive behaviour are natural parts of life.

   1                       2                       3                       4                       5                       6                       7

4. Man has an inner drive to develop into a good, happy and self fulfilled. Deep down we all strive to actualise the unique potential we all have and to become loving and happy persons; we strive towards blossoming rather than just survive and reproduce our genes. Apart from animals in general we are aware of our own existence and we have freedom to choose how we want to be and we can take responsibility for who we are. Aggressive and evil behaviour arises when our drive towards self fulfilment gets frustrated, that is when we are not functioning properly. How much love and respect you receive from others is not the crucial thing, but rather to take responsibility for yourself and to be accepting and loving towards others.

   1                       2                       3                       4                       5                       6                       7

Which one of these views do you agree the most with? Choose one of the views above. Nr: ........