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Normative authority for empirical science

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In this article I explore the hypothesis of normative authority by epistemic authority. This is the idea that scientifically warranted claims in psychology, in being claims about human needs, interests, and concerns, can acquire authority on which values do or do not merit endorsement. The hypothesis is applied to attachment research: it seems that on the basis of what is now known about attachment, specific normative conclusions seem warranted. I argue that although attachment research and theory are value-laden, they are empirically quite solid, hence entitled to epistemic authority. Having established this, I explain how such epistemic authority carries over into normative authority.

Keywords: normativity; science; epistemic authority; psychology

1. Introduction

Human beings have always reflected on who and what they are. Such reflection used to be the domain of common sense, narrative, or philosophy. But scientific psychology was born, and human beings became the subject of systematic and large-scale empirical research in well-funded institutions. This relatively recent phenomenon deserves special notice. First, it is science – at least, that is the pretention. Second, its subject is human beings – living, sentient, active, thinking, social and cultural–historical beings with needs, interests, and concerns.

'Psychology' here refers to what is also known as BCN science, the broad cluster of behavioural, cognitive, and neuroscience.[1] Especially today, this is a domain of ground-breaking research. In just a few decades' time it has given us cognitive access to many formerly puzzling aspects of human behaviour, with concepts such as mirror neurons, microexpressions, the adaptive unconscious, priming, cognitive dissonance, negativity bias, and somatic markers. Today's scientific psychology provides us with an ongoing stream of new empirical findings about ourselves.

Some of these findings confirm everyday wisdom or stereotype: teenagers have trouble with estimating risks; too much choice breeds dissatisfaction; smiling reduces aggression. Other findings are more surprising, even unsettling: situation matters more than personality for what we do or think; moral judgments are made before we consider any reasons; emotion guides even our most abstract reasoning.[2] In any case, after some aspect of human behaviour has been systematically studied, things are no longer the same. What

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was formerly common sense, intuition, prejudice, ideology, or philosophical wisdom is replaced, corrected, or confirmed by science. Science can play this role because it is a methodic, transparent, and critical way of obtaining knowledge, so that its claims have authority. Thus, if psychology is scientific in this sense, then its results should be authoritative for what we shall believe or claim about human beings.

Claims about human beings, however, tend to be more than claims about mere matters of fact, because they will often be claims about human needs, interests, and concerns. Talk about human beings is talk about such things as well-being or suffering, success or failure, rationality, justice, identity, or values. This might mean, first, that claims about human beings are not disinterested. Second, it might mean that such claims have normative implications, i.e. not just further claims about mere matters of fact, but also value judgments and prescriptions.

Below, I would like to explore the hypothesis that authoritative beliefs about what we human beings are like translate into authoritative beliefs about what values we should or should not endorse. More informally: scientific psychology, by virtue of being good science, can come to tell us what we should or should not find important in life. Briefly, it is the hypothesis of normative authority by epistemic authority.

It might seem that concerning the relationship between science and values, we have a choice between three positions: value-free science with epistemic authority; value-laden science without epistemic authority; and value-laden science with epistemic authority. The first position, which may be called the 'classical' one, in the sense of old-fashioned but still influential, is the idea that scientific discourse is authoritative but value-free, so that scientific claims about human beings have no normative implications. Scientific authority concerns factual beliefs, not norms or values. Science can inform our normative reasoning, i.e. provide it with factual premises, but the values and norms on which we base our normative conclusions do not originate in science, but elsewhere – for instance in tradition, religion, or personal choice. The normative part is extra-scientific.

It is compatible with this view that science should involve values of an epistemic character, such as truth or consistency, and the moral values that go with them, such as discipline, integrity, and truthfulness. And of course, scientists themselves, being human persons, are known to move about in the domains of taste, politics, ideology, religion, and morality. But not in their role as scientists. As such they remain credible precisely insofar as they maintain neutrality on all except the epistemic values.[3]

The second position is the idea that scientific discourse is value-laden but of questionable authority – authority, at best, in just a local, context-bound sense. Science is portrayed as a culturally and historically situated institution, or as a social activity that is shaped by all kinds of cultural, economic, ideological, and political forces, as well as by personal interests, tastes, biases, and commitments. On such a portrayal, values can be seen to pervade all aspects of science, including research methods, choice of subject matter, vocabulary, research ethics, hiring and financing policies and, most controversially, results.[4]

The third position is the idea that scientific discourse is value-laden in much the way just indicated, but not so much so that its authority is compromised. This may be because epistemic considerations will trump biases and distortions when it counts, i.e. in the context of assessing evidence. But also, value-laden discourse itself may even be indispensible for objective and properly authoritative results.[5]

The positions just outlined concern the role that values play in science. As such, they belong to the philosophy of science. But there is also the issue of normative implications mentioned above, and this issue seems rather to belong to another domain: that of meta-ethics.[6] This is the domain to which my hypothesis belongs. The hypothesis of normative

authority by epistemic authority concerns the implications of science on our values, rather than the role of values in science.

This hypothesis mixes up science and ethics, and it will be resisted by those many contemporary scientists who subscribe to the 'classical' position described above.[7] But even philosophers, who will in general be more ready to reject a fact-value dichotomy and to accept value-laden science, may well see reasons to oppose it.[8] The hypothesis will be difficult to defend in the abstract.[9] This is why Section 2 will be about attachment research, a case study that might provide an intuitively appealing existence proof of normative authority by epistemic authority. In Section 2, the prospects of attachment research for epistemic authority will be explored and, after some preliminary discussion in Section 3, also for normative authority (Section 4). In the last section, the kind of relationship between facts and values that the hypothesis relies on will be made explicit.

2. Attachment research

Attachment research is a blooming field in developmental and social psychology, and it is increasingly influential in educational and therapeutic practice. Initiated in the 1940s by John Bowlby and Mary Ainsworth, attachment research has become an industry, and attachment theory has been refined, extended, and tested to great lengths.[10]

Briefly, the theory is that human children, being helpless and dependent for a relatively long time of their lives, are predisposed by evolution to seek the proximity and emotional support of a main caregiver, usually but not exclusively their mother. In their turn, caregivers are predisposed to keep themselves available to their children, which means that they are physically accessible and also respond to them in a protective and sensitive way. Such availability is of major importance, because children can only learn and develop by exploration. Children are also predisposed by evolution to explore the world around them, but exploration brings risks, and children are well aware of this fact. So a normal behavioural pattern is that as long as the caregiver is known to be available, a child will be playful and inquisitive, occasionally renewing contact. If the child becomes separated from the caregiver, it experiences and expresses fear and anger, and stops exploring. On the caregiver's return, the child gladly and eagerly seeks contact, is soothed, and regains its exploratory attitude. (For older children, physical proximity matters less, but availability is still crucial.) The caregiver is treated as a secure base from which to explore, and as a safe haven to which to flee when there is danger or sorrow.

This behavioural pattern signals what is called 'secure attachment'. Attachment may also be insecure. Engaging in no attachment at all is not an option for a child, but styles of attachment may differ. This is because the caregiver may be cold, rejecting, uncommunicative, or controlling, and may even neglect or abuse the child. Insecure attachment styles are behavioural patterns that are adaptive in being aimed at making the best of such cases. Followers of Bowlby have identified three main types of insecure attachment: avoidant, ambivalent, and disorganised.[11]

They have also studied how attachment develops over time. The early years are crucial, and the patterns then formed have repercussions later on in life. Long before they can entertain any conscious thoughts, children develop expectations, called 'internal working models', about the way they will be treated by others. These expectations have experiences with caregivers as their basis. Although such models are susceptible to adjustment later on in life, under the influence of other attachment figures than the main caregiver in childhood, and although they only manifest themselves in the context of situations (which may or may not resemble the situations in which the models were formed), they put powerful constraints on later social development. Securely attached individuals will in general be self-confident,

communicative, open, and trustful; insecurely attached individuals will be more anxious, closed, clinging, unempathetic, or domineering. It has been argued on evolutionary, behavioural, and physiological grounds that among the behavioural systems by which adult love relationships are regulated, the key role is played by the very attachment system that has regulated the relation of the child to its caregiver.[12]

This hypothesis predicts that insecurely attached children will later on in life tend to have relatively unstable relationships, along with a host of social, emotional, and cognitive problems. This has been borne out by numerous studies.[13] Insecure attachment, although not itself understood as pathological, turns out to be a risk factor. In general, securely attached individuals are found to be happier, healthier, and better off in all respects than insecurely attached individuals. Thus, the assumption seems widespread that secure attachment is healthy and should be fostered, while insecure attachment is unhealthy and should be avoided or remedied.[14]

Not that insecure attachment is not adaptative. Insecure attachment styles, at least the avoidant and ambivalent ones, have probably evolved as ways to make the best of specific types of caregiving environment.[15] But they have serious costs. For instance, attachment is closely related to exploration behaviour, its very point being to find the right balance between two vital interests, namely exploration and safety. As insecurely attached children feel much less free to explore than do securely attached ones, secure attachment serves a child's interest in exploration much better than insecure attachment.[16] Even though adaptive in some circumstances, it very much seems that insecure attachment compromises many pursuits in a normal human life.

Attachment theory has dispersed from the academic journals, first to textbooks, and then to the popular media, and is eagerly absorbed by parents, teachers, therapists, and government officials.[17] Many people today appreciate that the causes and consequences of the various attachment styles have been thoroughly studied, and that the gains of fostering secure attachment on the part of children will be large, as well as the costs of not doing so.[18] Attachment research shows us that children need available, sensitive, and responsive main caregivers. If this need is not met, serious harm is done.[19] Accordingly, educational practices and arrangements that were still common half a century ago, such as harsh discipline, large families or orphanages, have now been largely abandoned. And wilful ignorance about secure and insecure attachment is becoming just as much a cause for public reprehension as wilful ignorance about pregnant smoking or drinking.

Of course, shaping secure attachment-friendly arrangements is not cheap. One needs foster families, not orphanages; a reliably available preschool teacher for each child, not large groups or a parade of part-time workers; long parental leaves for working mothers as well as fathers; and professional support for stressed or depressed parents. But mental health for children seems such an obvious basic good that making an issue of costs seems almost indecent, a failure to appreciate what psychology teaches us about our real interests.

The above should illustrate what was earlier called normative authority by epistemic authority. But many of the claims may strike the reader as rash. First, is attachment research really that solid? Second, is the above, with the bold jumps constantly made from facts to value judgments and prescriptions, not one bland naturalistic fallacy? I will now address these issues.

3. Epistemic authority

Earlier on, I outlined three positions concerning the relationship between science and values: value-free science with epistemic authority; value-laden science without epistemic

authority; and value-laden science with epistemic authority. The first of these is incompatible with the hypothesis of normative authority by epistemic authority, because it disavows normative authority. The second is also incompatible, because it disavows epistemic authority. Only the third is compatible, as it has a role for values, and also allows epistemic authority.

Then, is this third position plausible for attachment research? As to value-ladenness there seems, in general, little properly psychological knowledge about research that is strictly limited to measurement, controlled experiment, and quantification. And as made amply clear in the previous section, attachment research is in any case not like that at all. It is, among other things, about love, trust, and happiness.[20]

Then what about epistemic authority? Let us define epistemic authority as the recognisable ability to give reliable information about what is the case. We are here exclusively concerned with justified authority: credibility rather than reputation or influence. Scientists are credible in this sense if, and only if, the public has valid reasons – empirical evidence and logic, rather than threats, bribes, or reverence – for believing that their claims are true.[21] Epistemic authority in this sense means that the public must in principle be able to see and conclude for itself that the pertinent claims are true, regardless of who makes them. In some textbook detail: the claims must have an empirical basis; the evidence must have been acquired in a painstakingly systematic way, by way of tried and tested procedures; assessment of the evidence must be critical, in that alternative hypotheses for explaining the data have been carefully ruled out; reports must be public and transparent (procedures followed and data obtained must be described completely and accurately, to allow replication of the research); and the claims must be consistent with a background of established further knowledge.

Although today's behavioural researchers are very conscientious about method, all this may be more ideal than reality: studying human subjects generates a range of special difficulties. Composing groups of participants and keeping them intact over time, classifying behaviours, navigating ethical hurdles, and especially managing large sets of variables: all these are daunting tasks.[22] The worry that any of this will always preclude robust results seems not at all unreasonable. Indeed, the reputation of psychology as hard science has throughout the twentieth century been poor. Psychology has always been a disunited field, with a variety of different schools and theoretical frameworks, and many once-promising approaches and theories have been discredited rather than steadily improved. Concerning our case: Freudian and Skinnerian theories of attachment, based on the assumption that a child's proximity-seeking is motivated by food, enjoyed great confidence in their days, but did not hold up. It may well be that today we are unduly naïve about attachment theory.

Even so, the case for attachment theory looks rather promising. In the way of empirical evidence, early famous examples are Bowlby's and Robertson's documentation of the moods and behaviours of hospitalised children, and Harlow's surrogate-mother experiments with rhesus monkeys in the 1950s.[23] But these were only the beginning. Further evidence consists of manifold established correlations: between caregiver insensitivity and insecure attachment, between results of the Attachment Q-Sort (a method for observing attachment style at home or in day care) and results of Strange Situation experiments; and between a person's attachment quality and the frequency of specific types of experience later on in life.[24]

Also, attachment theory does not stop at correlations, and specifies the mechanisms that enable causal explanation. At play are mechanisms at the level of cognition, emotion, and behaviour (attachment is studied as a 'behavioural system' that is triggered under specific

conditions), and neural and physiological mechanisms, with a key role for the neurotransmitter serotonine. Supporting all this is a convergence of results from neuroscience and physiology on the one hand, and results from classic attachment research on the other. Attachment theory, being consilient with evolutionary biology, also specifies evolutionary mechanisms that explain why attachment and caregiving behaviour exist.

Of course, a reliable verdict on the quality of attachment research, or on the evidence that allegedly supports attachment theory, would be far beyond the scope of the present argument. That attachment research has become so big is no guarantee that it is good science, that the theory underlying it is true, or that we will ever understand this part of human behaviour. But the tentative conclusion does seem warranted that attachment theory and research do have considerable credit.

4. Normative authority

Does epistemic authority translate into normative authority – the recognisable ability to make good normative judgments? Before this question can be answered, some preliminary issues need clarification.

In the way of meta-ethics, let us adopt the following minimal framework concerning values, norms, and practices. Let values be the things in life that we find especially important – not individually and idiosyncratically, as mere concerns, but in community and critical exchange with each other.[25] Values are then manifested by way of norms, which are rules that specify how circumstances are to be responded to. And practices consist in the following of such norms. By way of an example: if we together find democracy important, democracy is one of our values. We will then have laws, procedures, and institutions to implement democracy, which amounts to a system of norms. And our collective acting on these norms constitutes our democratic practices.[26]

A point that will instantly become important is that any system of values (to focus on these) must to some extent be consistent, and that inconsistencies generate the need for readjustment. Values cannot be endorsed as a mere bundle, because they may support or defeat each other when put into practice. For instance, we cannot at will endorse both world peace and militarism, because the two tend to work against each other, and endorsing both seems to amount to endorsing neither. Rather than itself being just one further value, consistency seems constitutive of having values in the first place. Values are endorsed by way of behaviour – if only favourable thoughts, feelings, and lip service – and without any pattern in such behaviour, the very notion of 'endorsing' a value does not seem intelligible to begin with.

Our values must thus form a system, just as our beliefs do. In fact, our system of beliefs and our system of values are in no way separate. While factual beliefs are mainly bolstered by other such beliefs, values must receive support from both factual beliefs and further values. For instance, when asked why hygiene is important, we may explain that it wards off germs, but this will only be intelligible when it is understood that germs harm our health (a further value). Connections abound: our system of beliefs and values can be thought of as a Quinean web, at least if it is appreciated that consistency is not just a matter of logic, but also of practical compatibility.[27] It is a dynamic web with loose threads and tensions in some places that is continually rewoven under pressure of changing circumstances, and accompanied by critical public debate.

Some preliminary points about normative authority are also in order. First, normative authority is a community-level phenomenon. We already saw that endorsing values is a communal affair, but science is also the project of a community, and scientific facts are a

collective possession, too. Thus, the hypothesis of normative authority by epistemic authority is a first-person-plural hypothesis about the values of we-together. Such authority will also be personally relevant, however: community–level values do guide individuals in leading their own lives.

Second, normative authority is different from normative pretention. Psychological texts, on attachment or otherwise, may bristle with normative terms such as 'pathology' or 'abnormality', they may be prescriptive in character, and they may contain a great deal of moralising. But we are not here interested in the mere normative pretentions of psychology, but in the question whether, and if so how, such pretentions can be justified by empirical means.

Third, normative authority is different from influence. It will hardly be controversial that science can profoundly influence our lives, even to the extent that not just our circumstances, but also our values are affected. For instance, it is likely that modern attitudes towards sex and family would have been quite different without the widespread availability of contraception, which in turn was enabled by insights in physiology and biochemistry.[28] But this is not an example of normative authority, because those insights seem to merely have caused, not justified, said attitudes. Nor is normative authority a matter of social influence. As a matter of sociological fact, scientists and scientific institutions no doubt enjoy a great deal of authority, in the sense that others allow them to influence their attitudes and decisions.[29] But whether such influence is justified is quite another issue.

Fourth and finally, there can be normative authority in the weak sense of authority concerning norms and practices, but not values. For instance, the facts of attachment as we have learned them seem to justify norms and practices that enable or support caregiver availability. Simplifying a bit, children need a reliably available caregiver for their mental health, and mental health is one of our values. Here, scientific knowledge justifies specific norms and practices, but in the context of a value that was already in place.[30] This is normative authority by epistemic authority in a sense, but of a kind that seems easily accommodated by the 'value-free science' position discussed earlier. Values can here be construed, Weber-fashion, as ends, norms as means by which these ends might be achieved, and scientific facts as information about which of these possible means will work best.

Not that the separation between knowledge, means to ends, and the ends themselves that this construal relies on is very plausible. Consider that a background of values is necessarily present for any piece of new knowledge to land into: it is only persons who acquire scientific knowledge, and persons are necessarily beings with values. Of these values, many will be so ingrained that they will not even show up as 'ends' in those persons' practical reasoning, but rather as constraints, or as part of the persons' very cognitive framework.

5. Normative authority for attachment theory

The hypothesis of normative authority by epistemic authority in its proper sense concerns the justification or criticism of values themselves. This would be a quite thoroughgoing authority, for our endorsement of specific values expresses who we are. It goes all the way, farther than authority on what is good or on what we ought to do. Now, granting its epistemic authority, could attachment theory be entitled to this kind of authority?

Not if values are ordered hierarchically. One might hold that for any culture or community there is an ultimate and highest good, or small cluster of such goods, which could never be given up because it is the measure of everything else: happiness, human dignity, classlessness, subjection to the Almighty, and so on. If there are such highest goods, empirical

discoveries could only be about means to already-established ends, and as such about values of a derived character, but not about the ultimate ends themselves.

Such a construal does not seem to apply, however, to real-world cultures in which values change profoundly over time. In modern Western Europe, for instance, values related to sex, religion, and authority have been subverted within a few centuries. Today, the package includes freedom of speech, mobility, artistic excellence, biodiversity, and much more, but it seems difficult to point out any ultimate and highest good or goods among these. Admittedly some values, such as the rule of law, are no doubt more central to the Western identity and way of life than others, such as reverence for members of royal families. And there may be values in our system that no human society can ever afford to abandon. But we do not seem to find a neatly ordered system, nor a core of ultimate values to which all else is a means.

This takes us back to the Quinean construal offered above: a diversity of values and beliefs that form a web, a certain amount of internal tension and loose threads, various measures of consensus or disagreement surrounding each of the values, and ongoing readjustment. Such readjustment can, of course, be portrayed as a matter of natural, technical, and social 'forces'. But it seems quite implausible to construe the relationships among beliefs and values as merely causal. Tensions or disequilibria are in fact inconsistencies, and they are reasons and not just triggers for change.

It also seems that new knowledge, especially if it is both value-laden and authoritative, is a primary inducer of inconsistency.[31] Consider attachment theory: in teaching us that emotional support is one of a child's most central needs, it puts pressure on educational ideals centred on values such as obedience, discipline, and independence. What we see here is not a piece of new knowledge justifying one unique change in values. Indeed, the Quinean idea is that for any perturbation of the network, there are many ways in which the network can be readjusted. On this construal, scientific knowledge does not prescribe any specific option, but only constrains the range of viable ones. In our example: even when we take attachment theory seriously, we may in the end let other values trump secure attachment. In practice, however, we will find our room for maneuvering rather limited when lifelong mental health is at stake.

It can be objected to the above that compared with the weak form of normative authority concerning norms, it is just more or less the same. Scientific knowledge was said to justify specific norms, but in the context of values that were already in place; now, scientific knowledge is said to justify specific values, but in the context of further values that were already in place. This is correct, but it should be remembered that knowledge justifying values in the context of pregiven other values hardly allows of a means-end construal. In the case at hand it is not as if, with some new knowledge in hand, we can choose between more and less efficient means to achieve a specific end, i.e. some further and ultimate value. The values are connected but, as we saw, not hierarchically.

With the above construal of normative authority by epistemic authority in place, let us finally see how the normative authority of empirical science may even go beyond some shifts here and there in an existing system of values, and support or threaten larger parts of such a system. For this, too, is what the case of attachment research shows us. A central part of our vision of the good life is at stake: our values concerning our relationships with those around us. If human beings will be the most emotionally stable, and most socially and cognitively competent when having a secure attachment style, and will risk emotional, cognitive, and social impairment when having an insecure style, then attachment research seems to present us with an empirically supported rounded-out ideal for the way

we relate to others. Stability, harmony, acceptance, and trust are vindicated; volatility, conflict, and mistrust are dismissed – on scientific grounds.

6. Conclusions

Above, I have explored the hypothesis of normative authority by epistemic authority. It is the idea that when we ask which things in life should be really important to us, we might ask science. Our values are likely to be ill-informed, confused, or inconsistent, and a value-laden but empirically responsible scientific psychology that reliably informs us about human capacities, needs, interests, and concerns, can be a valuable ethical guide. Its normative authority, generated by epistemic credibility, will cover norms, practices, values, and even whole clusters of values – visions of the good life.

I have not tried to establish this for scientific psychology in general – in many cases, legitimate normative authority will no doubt be lacking – but just for attachment research and theory. But if my hypothesis is true, the established values of tomorrow may already be implicit in many findings and concepts of today's psychology.

Is this a good thing, especially if the knowledge comes our way whether we have asked for it or not? I have not explored this question, but of course it deserves a close examination.

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Notes

1. Two other domains of study concerning human beings, the social sciences and the humanities, and their contested status as scientific disciplines, will not concern us here.
2. The aptness of these examples can, of course, be contested. Teenagers: see Cohn et al. (1995); choice: Schwartz (2000); smiling: Keltner, Young, and Buswell (1997); situation: Gilbert and Malone (1995); moral judgments: Haidt (2001); emotion: Damasio (1994).
3. The primordial source of this view is Hume (1740, Book III, part I, section I). A classical formulation is by Weber (1904, 149–150): empirical science is about means, not ends. Also influential have been the Kantian conception of pure reason in ethics, Moore's 'naturalistic fallacy' account (1903, section 12), and the logical positivist's ethical non-cognitivism (Ayer 1936, Ch. 6). For a good historical account, see Proctor (1991). The 'fact-value dichotomy' at the basis of all this has been a persistent target of philosophical argument in metaphysics, epistemology, and meta-ethics. See, e.g. Putnam (2002).
4. This is the position associated with social constructionists such as Bloor (1991) or Harding (2008).
5. Longino (1990), for instance, argues that because of underdetermination of theory by evidence, a diversity of critical value-laden perspectives is required to achieve objectivity. Collections such as Kincaid, Dupré, and Wylie (2007) or Machamer and Wolters (2004) suggest that the third position is becoming common wisdom in the field. Douglas (2009, 176) puts it as follows: 'Even in rejecting the value-free ideal, we would be foolish to allow values to serve in the same role as evidence throughout the scientific process. That would indeed undermine the value of science itself, its basic integrity and authority. However, we can retain the baby and throw out the bathwater by differentiating between the roles values play in science, and restricting values to the indirect role at key epistemic moments in science – particularly when assessing the strength of evidence for empirical claims'.
6. Note that the first, 'classical' position covers both domains. Also note that there is an issue about normatively salient causal consequences, too: that issue, which will not be taken up here, belongs to normative ethics.

7. Consider Gould (1997), who seems to articulate what may well be a majority view among scientist-believers, probably even scientist-unbelievers: 'The lack of conflict between science and religion arises from a lack of overlap between their respective domains of professional expertise – science in the empirical constitution of the universe, and religion in the search for proper ethical values and the spiritual meaning of our lives'.
8. Although naturalistic approaches in ethics are now numerous, I expect my hypothesis to be controversial. Harris (2010) makes an analogous, yet different case: he argues that science can tell us what is morally right because morality is about consequences for well-being, and well-being is a matter of brain states that can be studied scientifically. Flanagan (2007), too, stresses the normativity of psychology, but he construes ethics as an empirical science (involving much more than just psychology), rather than the other way around, as I do. Of course, positive psychologists, such as Haidt (2006), Keltner (2009), and Seligman (2011), also draw normative conclusions from empirical research, but without making much of a philosophical issue out of it.
9. For one thing, this would raise intricate issues about evidence. Suppose that we accept that terms, such as 'healthy', 'normal', intelligent', and so on, are descriptive as well as evaluative in character (so-called 'thick ethical concepts', see Putnam 2002, 34-40), and that there is no way to tease those aspects apart. My discussion suggests that epistemic authority is mainly a matter of evidence. Now, even if it is granted that data cannot be described except evaluatively, and even if in the conclusion the descriptive and the prescriptive are inseparable, evidence might still be argued to be a relation among the factual, not the evaluative or prescriptive aspects of data and conclusion. For a related discussion, see Sober (2007).
10. For in-depth study one may consult Bowlby's own three-volume work *Attachment and Loss* (1973, 1980, 1982) or collections such as Goldberg, Muir, and Kerr (1995) and Cassidy and Shaver (2008).
11. See Ainsworth et al. (1978).
12. See Zeifman and Hazan (2008).
13. For an overview, see Feeney (2008). See also Parkes et al. (1991).
14. Hinde and Stevenson-Hinde (1991, 61–62) follow Bowlby (1982, 378) in holding that even though insecure attachment can be fitness-enhancing, psychological well-being anyway requires secure attachment.
15. James (2002, 179–81) makes the disturbing claim that the disorganised pattern of insecure attachment has been adaptive throughout much of human history. He points out that in the conditions of poverty that since the advent of agriculture and until very recently were the lot of most humans, child abuse was common practice. In fact, this prepared the children well for their dangerous and violent social world: secure persons would be too nice and trusting to face post-prehistoric and premodern human reality. 'By physically abusing the child, the parent can avoid expending overstretched resources like time, energy or emotional wellbeing'. (181) On the other hand, '(m)altreated children tend to become opportunistic, selfish and amoral adults' (181).
16. See Weinfeld et al. (2008, 81).
17. Psychology textbooks standardly have a section on attachment theory, whether general (e.g. Gazzaniga and Heatherton 2006, 438-41), developmental (e.g. Schaffer and Kipp 2007, 435–57), lifespan (e.g. Boyd and Bee 2009, 150–57), or social (e.g. Aronson, Wilson, and Akert 2005, 342–45). The theory has spawned organisations such as Attachment Parenting International and parent training methods such as VIPP-SD by the Leiden Attachment Research Program. I will not here try to assess the influence of attachment theory on government policies.
18. Note that in attachment theory, attachment is often conceptualised intrapersonally, not as a relation. See Cassidy and Shaver (2008, 12). Others in the same bundle talk routinely about attachment relationships, e.g. Weinfeld et al. (2008).
19. On 24th August 2010, the Dutch news program *Netwerk* presented an item about a boarding house for babies in Waregem (Belgium) that had opened that day. Working parents could here commit their babies of even a few months old for full-time care for a period as long as four days and nights. The project was sharply criticised, and all critics feared a disruption of the babies' attachment. Admittedly, attachment-related child care policy issues can be quite complex. See, e.g. Rutter (2008).
20. A sociological study of attachment research over the decades might bring out that values pervade attachment research in many other ways. Hrdy (2009) argues that Bowlby emphasised

'continuous-care-and-contact mothering' (83) in his theory, overlooking infant-sharing practices among humans and many nonhuman primates. She suggests that this reflects 'preconceived Western ideals of how a mother *should* care for her infant' (84). Points like these are surely interesting, but in the present context they are relevant only insofar as they affect epistemic authority.

21. We can thus speak derivatively (as I will routinely do) about the authority of beliefs or claims, which is really the authority that scientists have in virtue of the fact that their claims have scientific warrant.
22. Possibly relevant variables in attachment research include parental behaviour, genes, age, siblings, other family and people outside the home, culture, ethnicity, socio-economic background, intelligence, personality, and incidents such as illnesses.
23. In the 1940s and 1950s, Bowlby and Robertson studied small children in hospital who were, as was standard practice, separated from their parents for an extended period of time. Especially Robertson's filmed records showed how devastating this practice was to the well-being of the children, and how it alienated them from their parents. Despite initial scepticism and hostility by the professional community towards this research, the evidence was convincing enough to lead to changes in hospitalisation practice. See Kobak and Madsen (2008).
24. Caregiver insensitivity and insecure attachment: Laible and Thompson (2000); Attachment Q-Sort and Strange Situation: Vaughn and Waters (1990); Attachment quality and later experience: Berlin, Cassidy, and Appleyard (2008).
25. Compare what Tiberius (2008, 23–24 and 45) calls 'value commitments': goals that are relatively stable and general, are found desirable, are action-guiding, and are standards of evaluation and justification for further values.
26. It is thus left open how it all connects with meta-ethical concepts such as rationality, morality, virtue, utility, or flourishing. I consider this an advantage.
27. See Quine (1951).
28. The influence might be even more direct: see Dupré (2001, 85–92) about evolutionary psychology and moral attitudes concerning rape.
29. See Brown (2009) for a recent treatment of scientific authority along these lines.
30. A possible objection that I will not exploit here might be that the new knowledge will influence our conception of what mental health consists in, and even transform it.
31. Much less, of course, if truth and objectivity were not so central among our values.

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