Mindshaping and intellectual virtues

Alessandra Tanesini

Abstract: This chapter argues that intellectual virtues are products and tools of mindshaping practices in the service of joint epistemic activities. Virtues have culturally evolved because they maximise mutual intelligibility and facilitate cooperation. Hence, even though intellectual virtues are individual character traits their genesis, function, and functioning are wholly social.

Character is a human psychological feature that is not shared by other primates.[1] It is also the product of repeated activities whose function is primarily to shape the minds of those whom they target so that they acquire those settled global dispositions that constitute individual characters. Intellectual virtues are among the character traits that are brought into existence in this way. Hence, even though intellectual virtues are psychological traits of individuals, their acquisition and preservation is generally socially mediated. In addition, or so I argue in this chapter, the ultimate practical and epistemic ends that explain why human communities have shaped their members into creatures with virtuous character traits are inherently social. Human beings are constantly under social pressure to be intellectually virtuous because those with these traits are better able to coordinate their epistemic and practical activities with others in their community than those who lack these features. That is, individual virtues have been culturally selected for their social epistemological and practical benefits.

This chapter consists of four sections. The first introduces the notion of a mindshaping practice or activity and explains its role in cultural evolution. Ultimately, it is humans' evolving ability to shape each other's mind and susceptibility to having one's mind shaped that has enabled us to solve numerous coordination and mixed-motive problems thereby enhancing our ability jointly to perform practical and epistemic tasks.[2] Section two

---

[1] Individual non-human animals might be different in temperament from each other so that some take more risks than others for example. However, we typically do not think of some individual non humans as more courageous, or more openminded than others.

[2] A coordination problem occurs when there are no conflicts of interests in so far as all involved wish to coordinate their activities in order to succeed. A mixed-motive problem occurs when cooperation is costly for at least some of the actors involved (Bicchieri, 2006, pp. 2-3).

redescribes the processes and techniques of character building as examples of mindshaping and self-shaping whose primary function is to enhance mutual intelligibility in the service of solving coordination problems. It also shows that character attributions serve the purpose of making character rather than merely describing it. If successful, character attributions have the powers of self-fulfilling prophecies (cf., Alfano, 2013). The third section focuses on intellectual virtues as the products and tools of mindshaping activities. The concluding section briefly sketches why this approach also promises to throw novel light on the evolution of intellectual vices.

1. Mindshaping

In its broadest sense, "mindshaping" refers to any activity whatsoever that leads some person to change some of her propositional attitudes, emotions, values or settled dispositions (Mameli, 2001). For example, if I become angry as a result of being insulted, the insult is, in some sense, a mindshaping activity. Since most social exchanges are directly or indirectly concerned with changing the minds of those with whom one is interacting, mindshaping, in this broad sense, is both ubiquitous and highly heterogeneous.

In the philosophy of mind, mindshaping has emerged as an account of folk psychology that is an alternative to the traditional mindreading approach (McGeer, 2007, 2015; Zawidzki, 2013, 2018). Mindreading in either of its two main variants (theory-theory and simulation) holds that human beings are typically able to predict others' behaviour by correctly figuring out the independently formed mental states that guide that behaviour. This figuring out is an epistemic task that is achieved either by theorising or by simulation. Irrespective of the mechanism, folk psychological attributions of beliefs, desires, emotions and character traits, according to these views, are empirical claims that correctly or incorrectly describe the mental states and traits of the persons one seeks to understand (Goldman, 2006; Gopnik & Wellman, 1994).

The mindshaping alternative holds instead that the primary function of folk-psychological attributions is to shape the target mind, so that it fits the attribution, rather than to describe that mind as it already is. For example, attributions of a belief to the self or to others would not aim to get right, or track, what the person already believes. Instead,

attributions would function to get that person to form and sustain accurate beliefs. This account of folk psychological attributions, as McGeer (2015) points out, offers a natural explanation of the so-called transparency of belief. When asked whether they believe that p, in ordinary circumstances normal human beings do not answer by first introspecting the contents of their mind, instead they try to figure out whether p (Evans, 1982). That is, in this case at least, a solicitation to engage in folk psychological belief self-attribution is treated as a request that one makes one's mind up in accordance with the evidence, rather than as a solicitation to introspect.

Supporters of the mindshaping account of folk-psychological attributions extrapolate from this and other cases to argue that whenever people attribute propositional attitudes, emotions, character or personality traits to human beings, what they are doing (irrespective of their intentions) has the primary function of shaping the minds of those to whom these features are attributed. Hence, attributions of belief aim to get others to believe what is right (in accordance to the appropriate epistemic standards), attributions of desire to make them desire what is proper (given some shared social norms) and in general to induce the targeted individuals to act in conformity with shared standards (McGeer, 2015).

When mindshaping is advanced as an alternative to mindreading, its supporters need to show that mindshaping predates mindreading abilities, so that we can have the first without the second. If there is no evidence for such dissociation then mindshaping is best seen as a phenomenon that complements mindreading (Peters, 2019), or one that essentially relies on the ability to mindread to get off the ground (Westra, 2020). In this chapter I am not trying to adjudicate this issue. For my purposes, it is sufficient that folk psychological attributions, and more specifically, trait attributions have a mindshaping function and that their prevalence and persistence is largely a function of their mindshaping powers. This empirical claim might be correct even though mindreading abilities are required for mindshaping to be effective.[3]

My focus in this chapter is on a broader range of mindshaping activities that comprises, but is not limited to, at least some folk psychological attributions. I do not, however, include any activity capable of causing a change in someone's mind. Instead, I

---

[3] Mameli (2001), for example, presumes that some mindshaping presupposes mindreading abilities.

restrict my attention to those activities whose proper function is mindshaping. These are actions and practices whose persistence and prevalence is due to their mindshaping powers.[4] There are many uncontroversial examples of mindshaping so understood. For example, shaping minds is the explicit aim of teaching. The educator wishes her students to form new true beliefs as a result of her teaching. In addition, she might foster learning by creating a classroom environment (a cognitive niche) that scaffolds the students' studying so that they are better able to acquire novel true beliefs and understanding. I discuss a number of these practices in section two, where I argue that thinking of character as a product of mindshaping throws light on the role and value of character in human communities.

There are several different ways of classifying mindshaping activities. For instance, one may wish to focus on the mechanisms involved, such as imitation, social learning of a different sort, or individual learning in some social environment. Instead, I use here two different orthogonal taxonomic principles. The first distinguishes practices of self-shaping from activities where the mindshaper is distinct from the person whose mind is being shaped. Individual learning and exercises of self-control are examples of the first kind; explicit teaching and expressions of other directed negative reactive attitudes such as blame and anger of the second.

The second principle concerns the nature of the mindshaping intervention. My interest lies in two kinds. The first comprises activities that set normative expectations; the second of activities that express empirical expectations. Normative expectations include demands or requests that establish novel commitments or obligations.[5] For instance, the person who promises to herself that she will take a walk every day, sets a new obligation for herself. The making of this promise is an activity of self-regulation. It is an act where one shapes one's own mind by creating a new reason to do something one might otherwise not

---

[4] Zawidzki (2013, 2018) defines mindshaping as any cognitive mechanism whose proper function is to make a mind match a (behavioural) model by shaping it to acquire dispositions to behave like the model. Roughly speaking, the proper function of a mechanism is what that mechanism has been selected for (2018, p. 31).
[5] Normative expectations are expectations that license normative statuses. They can serve to bring these statuses into existence as is done in promising, requesting or ordering. They can function to support these statuses by censuring behaviours that contravene them and rewarding compliance. They can also serve to affirm the presence of these statuses. I thus use the term differently from Bicchieri for whom normative expectations are second order beliefs about what others believe should or should not be done, believed and so forth (Bicchieri, 2017, p. 69, n. 10).

be inclined to do. Ordinary practices of blaming, praising and rewarding people for their actions, emotions, traits and beliefs also aim to set, or reinforce, normative expectations designed to shape people's mind to conform to shared social norms and values.

Surprisingly, empirical expectations also have the power to shape minds. These expectations are predictions, rather than demands. Curiously, these can come true even when they are based on false assumptions. It is well known for instance that people who expect to recover from an illness, even when that expectation is not supported by the available evidence, have a better chance of recovery than those who form a realistic assessment of their prospects. The expectation of recovery causes one to feel optimistic, less stressed, and more able to enjoy life. The psychological changes in turn impact the immune system and improve one's ability to fight infections. Expectations can thus become self-fulfilling prophecies (Snyder, 1984). These effects of expectations that fulfil them are known as expectancy effects (Mameli, 2001, p. 609).

These expectations can be self or other directed. For example, a person who thinks highly of her mathematical abilities also expects, in the sense of predicts, that she will perform well in a number of mathematical tasks. This expectation fills her with confidence which permits her to perform at the best of her abilities. The same confidence might also make her enjoy the challenge of solving mathematical problems. As a consequence, she practices doing mathematics, and her abilities improve. Self-directed expectations, which might have been poorly supported by the empirical evidence, causally contribute to bring about effects that confirm them.

By the same token, empirical expectations about other people can make them conform to the set expectations. For example, if parents expect their first born to inherit the family business, they might create an environment which facilitates in this offspring the acquisition of the skills required to lead a business. These parents might treat the second born differently by expecting him to follow his brother rather than to lead him. Since the two children find themselves in what are, in effect, different cognitive niches, they are likely to develop different behavioural dispositions which given the incentives set up by the parents are likely to make them best suited to the roles that the parents expected them to fulfil. This might occur without the second born ever thinking of himself as a follower. He

might be put under less pressure by the parents who might also encourage interests unrelated to the family business.[6]

In several cases, however, the internalisation of the expectations in the target's self-conception plays a causal role in the generation of the expectancy effects. A paradigmatic example of this phenomenon is the transmission of gender stereotypes. Adults' different gendered expectations of children's behaviours lead them to treat male and female babies very differently from each other. Because they find themselves in different social environments, children acquire different behavioural tendencies depending on their gender. These differences in dispositions are sharpened as children learn to identify with the gender attributed to them. Subsequently, children internalise gender stereotypes in their self-conceptions. As a consequence they believe the stereotypes and act them out (Snyder & Klein, 2005).[7]

These examples give an initial flavour of the heterogeneous practices and activities that shape human minds. Some of these are deliberately performed to this end as they consist in the creation of normative expectations to change opinions and behavioural dispositions. Others have these effects, although actors do not always intentionally set out to achieve this end. It is plausible that humans' heightened receptivity to being shaped by conspecifics and tendency to engage in activities that result in the shaping of minds are the result of cultural evolutionary pressures. That is to say, even without genetic mutations of any sort, some human beings living in communities have acquired novel abilities which can be transmitted horizontally and vertically across generations. Because these abilities give an advantage to those who possess them, overtime they become more and more prevalent in the population.

I borrow an example from Mameli (2001) to illustrate the point. Suppose an early human, for whatever reason, behaves toward her babies in ways that imply that she attributes to them a precocious ability to communicate. Unlike her contemporaries, she treats the babies' non-sense vocalisations as attempts to communicate with her. Hence,

---

[6] Explicitly wanting to fulfil the parents' expectations so as not to disappoint them often also plays a role. The mere existence of the expectations is thus also an incentive.

[7] As this final example illustrates often normative and empirical expectations combine to supply both reasons and incentives to conform with expectations. Further, often these reasons and incentives are the result of societal expectations, rather than those of single individuals (cf., Bicchieri, 2017).

whenever a baby vocalises, she rushes toward the child or pays her special attention. The baby thus learns to associate these sounds with her mother's appearance and begins to use the sound as a call. Thanks to their mother's repeated communicative engagement with her, this baby, and her siblings, learn to speak earlier than other children and also acquire superior communicative abilities. These abilities give them an edge in their community. Further, when they have children themselves, they adopt their mother's child raising practices. Thus, these superior abilities are transmitted down the generations. Further, other members of the community might also adopt the same practices having observed the success of children raised that way. Of course, once these novel abilities are entrenched, they might make further mind shaping practices possible and thus generate cascading effects.

More generally, work on human cultural evolution strongly suggests that human social cognitive abilities have evolved in the direction of more and more refined communicative abilities in the service of finding better solutions to the coordination problems encountered by early humans (Sterelny, 2012). This is because coordination is made easier if all adhere to the same coordination-facilitating norms which include communicative conventions. Further, when tasks are complex and better handled by experts, coordination is enhanced if individuals specialise in different activities. Humans would have solved these problems by adopting divisions of labour in accordance with clearly visible markers (O'Connor, 2019).

Mindshaping activities are uniquely well-suited to facilitate the kind of maximal mutual intelligibility instrumental to solving coordination problems. It is much easier to coordinate one's actions with a person who conforms to what we expect of them than with one who does not. The effect of mindshaping is to bring oneself and others to behave in accordance with the same norms and to be intrinsically motivated to follow them. The result is the creation of what McGeer (2015) calls practice-dependent epistemic advantages. The person whose actions are regulated by some norms is in a better position to understand and coordinate with another who plays by the same rules, than with any person who follows different ones.

2. Shaping up: acquiring and retaining character

Character is the product of mindshaping activities. I take this claim to be a near platitude. In this section I first highlight some character-forming practices and show that they are examples of mindshaping. These practices include, but are not limited to, character trait attributions whose main function is steer people toward virtues and away from vices. Thinking of character as a product of mindshaping shows that character matters primarily because it enables success in joint practical and epistemic activities which require coordination. It is not only intellectual virtues that are advantageous in this way, all other character traits including moral virtues facilitate coordination since what matters for this purpose is that individuals' dispositions are stable and cross-situationally consistent.

It is the main contention of this section that shaping agents to have characters offers advantages in the service of coordination that are additional to moulding individuals into following the norms characteristic of beliefs and desires. McGeer (2015) highlights that mindshaping practices direct people to follow the same norms as each other. These practices would thus be analogous to training everyone to play by the rules of chess rather than, say, drafts. Here I argue that those practices that specifically mould individuals to acquire and retain character traits are instrumental to training people to playing the game continuously, rather than only engaging sporadically. Thus, any character trait, including intellectual virtues, makes its possessor more intelligible to others who play by the same game, and thus facilitates coordination. In the next section I argue that intellectual virtues specifically generate further advantages in the pursuit of joint activities.

Personality traits are global dispositions to behave, feel and think in specific ways when the circumstances are relevant. Hence, neatness, extroversion, courage, stinginess, rudeness and closed-mindedness are all personality traits. The ascription of these features to individuals highlights that it is expected that they will behave in accordance with the trait over time and across a range of different circumstances. Hence, personality traits are dispositions that are both stable and cross-situationally consistent.[8]

---

[8] I largely set aside here situationist worries about the existence of these traits. Recently, the robustness of the results on which these worries are based has also been called into question (Alfano, 2018).

Arguably there is an ordinary understanding of character that admits that all personality traits are part of character. In this sense someone's character is her personality. For my purposes here I adopt a narrower notion of character that identifies character traits as a proper subset of personality traits. According to this view, only those personality traits for which people are normatively evaluated are part of their character and thus correctly identified as character traits (Miller, 2014, p. 15). Hence, closed-mindedness, courage, and rudeness would be character traits, but extroversion would be best thought of as a mere personality trait.[9] Character traits would thus include moral and intellectual virtues and vices.

Even a moments reflection reveals that all the strategies that aim to form characters are examples of mindshaping in the broad sense of being activities whose function is to produce in those targeted by these strategies novel settled dispositions that match a model. These strategies are predicated on the assumption that character is acquired, and that it can be moulded. Further, the strategies are consciously adopted precisely because of their alleged efficacy in shaping minds so that they exemplify those model character traits which the mindshapers wish to inculcate in others.

These character-forming strategies include:

Explicit Teaching. In some settings, including but not restricted to formal education, young people and adults are told that some character traits labelled as virtues are worth pursuing for their own sake. Teaching creates incentives to behave in accordance to the virtues such as rewards for behaviour that is consonant with these traits. In addition, when teachers expect, in the sense of predict, students' compliance, these expectations themselves might cause students to behave in ways that fulfil them. Students, for instance, might get a sense of satisfaction from meeting the standards set by teachers.

Exposure to Exemplars. Adults and children meet in real life, and are presented with narratives about, people whose characters are held as exemplary by those who surround them. The emulation of exemplars probably starts as imitation early in life. Parents seek to be examples for their children. Older siblings are also often told to set an example. These

---

[9] But note that there is a tendency to evaluate people even for their extroversion or their neatness. Hence, people attribute moral overtones to dispositions to be tidy or messy.

practices explicitly rely on children's imitative propensities to shape their minds toward the acquisition of virtue. Many tales and novels for children also involve exposure to characters that are hailed as exemplars to imitate or to shun. These narratives often seek to inculcate in children the belief that virtue is rewarded (or that it is its own reward), while vice is punished.

Individual learning in cognitive niches. People acquire virtuous dispositions by practice. Even though this is done by individual learning, others can engineer the social environments that promote such practice. Hence, for example, parents who want their children to be courageous might put them in controlled situations that force the children to face danger. Even though the children learn to be courageous by learning to control their fears, their brave behaviour is also an expectancy effect of the parents' expectations. In turn, repeated courageous actions, together with the satisfaction of meeting parents' expectations, facilitate in the children the acquisition of those settled dispositions that are characteristic of courage.

Undoubtedly these characterisations are far too brief but they should suffice to indicate that the most common strategies of character formation are techniques to shape minds that rely on explicit rewards and punishments (normative expectations) and/or empirical expectations to bring minds to fit what is expected (normatively and empirically) of them. While this conclusion should be, on reflection, quite obvious, it is certainly less obvious that the practice of attributing character and personality traits to individuals is also best thought as an instance of mindshaping. Yet personality and character trait attributions offer a clearer example of mindshaping than the ascription of propositional attitudes considered by some supporters of the mindshaping account of folk-psychology (cf.,McGeer, 2015).

The mindshaping features of character trait attributions are at its most transparent when we consider the explicitly evaluative nature of virtue- and vice-ascriptions. In most contexts to say of people that they are open-minded, courageous or generous is a way of praising them. By the same token, to claim that someone is closed-minded or cowardly or stingy is to disapprove of them. We use this vocabulary as a way of enjoining people to preserve and develop further whatever virtues we attribute to them, and to change so as to eliminate or at least lessen whichever vicious features we ascribe to them. If this is right,

than the ascription of character traits is at least in part a practice whose aim is to strengthen virtue and weaken vice.

Folk psychological character trait attributions are thus a component of the practice of responding to each other by expressing a range of negative and positive attitudes like anger, guilt, hurt feelings, gratitude or admiration. Expressions of these attitudes convey normative expectations and thus supply reasons but also incentives to shape one's behaviour and mind so that it fits whatever is classified as praiseworthy or admirable in accordance to shared practices, and avoids that which is disapproved. In short, folk-psychological character attributions wear on their sleeve their evaluative nature as expressions of normative expectations that purport to influence minds and actions. For this reason, they - and the reactive attitudes with which they are closely connected - are best thought of as contributing to mindshaping practices.

These folk psychological ascriptions also have the self-fulfilling power of some empirical expectations. For instance, Richard Miller and colleagues (1975) have shown that telling students that they are tidy made them become tidier than a control group but also neater than those who were exposed to arguments in favour of tidiness. It appears that the students incorporated the label into their self-conception, thus becoming the tidier persons that they thought the experimenters took them to be. By the same token people who become aware of stereotypical attributions might subsequently acquire the traits that conform to the stereotype. For example, young girls learn very early on that girls are supposed to be more fearful and less aggressive than boys. In response girls often become less courageous and more docile than boys, they do so partly in reaction to how adults relate to them, partly through internalising the attributions about them made by adults (Klein & Snyder, 2003).

Alfano (2013) has offered a detailed account of how folk-psychological character attributions can function as self-fulfilling prophecies so that those who are labelled virtuous frequently change their behaviour but also motivations and thoughts to fit the label applied to them. Whilst my analysis is largely in agreement with Alfano's, I wish to take issue with two aspects of his view. First, Alfano interprets virtue labelling as a kind of mindreading that, whilst false, has the additional power to bring about its own truth (2013, p. 106). Such labelling is thus something akin to a noble lie which turns fiction into fact. This is why

11

factitious virtue would be factitious. Second, Alfano claims that factitious virtue is always motivationally distinct from ordinary virtues because the person whose virtue is factitious is 'in part motivated by a desire to maintain his self-concept' (2013, p. 101). That is, the expectancy effects of factitious virtue would always be mediated by incorporation into the self-concept. Hence, factitious virtue would only simulate real virtues without being identical with them.

With regard to the first point, Alfano resorts to claiming that virtue labelling is an indirect speech act where one uses an assertion to make a recommendation (2013, p. 106). In his view, virtue attributions, in addition to expressing normative expectations, would involve false claims about people's psychologies. In my account, instead, virtue labelling is a prediction which, because it is made, creates new incentives for its target to act in accordance with it. So understood, virtues would be factitious in the sense of being something that is partly manufactured through being ascribed. It is not fictitious, however, since trait attributions are not false assertions about independently existing psychological features of the target.

My disagreement with Alfano on the second point goes deeper. Alfano seems to think that the person whose virtue is factitious is ultimately partly motivated by the need to maintain a positive conception of the self. Since this motivation is not wholly virtuous, factitious virtue would only simulate the real thing, but be distinct from it. I think he is in this regard mistaken. Alfano's mistake in my opinion lies in isolating virtue labelling from other forms of mindshaping activities with which it is connected.

Virtue labelling is only one of the many practices that have evolved to shape human minds and behaviours. These practices do not create individuals whose good motivations are actually dependent on others' approval in the service of self-esteem. Instead, they produce genuine virtue because they create minds that are disposed to act virtuously out of virtuous motivation.[10] I shall return to this point below when I discuss the role of intellectual virtues in promoting cooperation among cognitively diverse agents.

---

[10] In my view the normative expectations which are adhered to by those who act virtuously are discretionary rather than mandatory. Mere failure to meet these expectations results in disappointment rather than in the kind of disapproval that is meted to those who stray into vice.

There is, however, at least one respect in which the products of mindshaping differ from virtuous traits as these are traditionally understood. The former but not the latter require continuous scaffolding and support. That is, techniques of mindshaping must operate continually to sustain a match between agents' attitudes and dispositions and the model or standards to which they are normatively and empirically expected to conform. When these scaffolds are removed, we should expect overtime agents to fall out of step with shared models. In short, mindshaped character traits are rendered stable by the continuous presence of external (and internal) scaffolds. Whilst this is a difference with virtue as traditionally conceived, the latter would also require continued application to be sustained. Further, mindshaping includes self-regulation in the form of undertaking commitments. Hence, the importance of this point of difference should not be overestimated.

I have argued so far that character is the product of mindshaping activities that set normative and empirical expectations and that are often deliberately designed to bring about mindshaping effects. Thinking of character as a product of mindshaping makes sense, once we notice that the maximisation of mutual intelligibility as a means to achieving coordination is the proper function of mindshaping. People who have characters, as well as beliefs and desires, have dispositions that are diachronically stable and cross-situationally consistent. Character traits would thus be internal scaffolds that help to stabilise one's behaviour over time and in different circumstances. Coordinating activities with people who have these traits is much easier than coordination with rational agents who are very susceptible to situational factors.

For example, compare two agents both of whom tend to regulate their beliefs in accordance with the evidence in their possession. These agents would usually have the same doxastic attitude about whether p, provided that they have the same evidence in their possession. Both agents are intelligible to someone with that evidence and who regulates her beliefs by the same evidential rules. Suppose, however, that one of these two agents is diligent, while the other is frequently apathetic.[11] The first individual always believes in

---

[11] The same point could be made for moral character since coordination among the brave is easier than coordination among those who are on occasion brave but sometimes cowardly. Note that any cross-situational consistency in dispositions facilitates coordination since a group of cowardly individuals also know what to expect of each other.

accordance with the evidence in her possession which she carefully assesses. The second agent's behaviour is more erratic. On some occasions he forms beliefs in accordance with his current evidence, but on others he is careless. Thus, these two agents often form different beliefs because only the first is able assiduously to follow the norms of belief. Coordinating activities among agents who are diligent is easier than coordination among agents who are idiosyncratically apathetic, or among groups including both kinds of agent. Agents of the first kind are more likely to be in step with each other over time and across situations than agents of the second kind. This is because character traits make agents' behaviour more stable and thus more intelligible.[12]

What I have said for diligence is also applicable to other character traits including those that are not virtues. The acquisition of character makes one's behaviour more regular, less susceptible to situational factors that are not controllable such as the weather. In this regard even vice is preferable to characterlessness. Whilst vicious persons cannot be relied on if they are dishonest or lazy, it is possible at least to rely on the stability of their vices. So although mindshaping practices serve the function of moulding minds that among other things exhibit virtuous characters, persons whose minds have been shaped into vice are still more intelligible than people of no character.

3. Intellectual virtues and mindshaping

I have argued that human beings that possess character traits in addition to beliefs, desires and other propositional attitudes are more likely to coordinate their activities successfully because they are mutually more intelligible than those who lack these traits. The advantage conferred by the possession of character is the result of the stability and cross-situational consistency of those behavioural dispositions that are an essential aspect of character. This stability and consistency facilitates coordination especially when all participants in an activity share the same character traits so that their propositional attitudes and actions would normally be expected to be largely in synch with each other.

---

[12] I am presupposing here that character traits tend to have high fidelity and thus admit of very few exceptions. See Alfano (2013) for the notion of high-fidelity virtue.

These considerations do not take into account that many human practical epistemic activities are carried out more successfully by groups that divide cognitive labour among participants who specialise in performing different tasks. The institution of division of labour has two important consequences with regard to subjects' ability to coordinate and willingness to cooperate. First, the development of specialisation brings cognitive heterogeneity in its trail. Second, specialisation makes it easier for some agents to free ride on others' labour. In this section, I argue that the possession of intellectual virtues is crucial in turning situations where there are conflicts of interest into coordination problems because they supply the intrinsic prosocial motivations necessary to avoid free-riding.[13] Often, these are coordination problems that are best solved when actors adopt complementary strategies, rather than act in the same manner (O'Connor, 2019, pp. 31-33). In this regard the intellectual virtues confer advantages additional to those conferred by the cultural evolution of other non-virtuous character traits.

The best way to address some problems, especially those whose solution requires possession of sophisticated skills, is to divide labour among group members. Different individuals are trained to perform different tasks so that together they are able to achieve their goals more reliably and efficiently. Such division of labour has proved effective to solve practical problems but also to carry out inquiries. For this reason, the vast majority of scientific research is performed by teams where individuals are allocated different tasks, and where junior members are often trained to acquire some specific skills. Hence, research specialisation is a source of cognitive heterogeneity.

The promotion of different skills in different subsets of the population creates opportunities for free-riding. There are situations in which the best outcome for each individual is to gain from others' labour without contributing a fair share. Of course, if all act in this non-cooperative manner, they all lose out. But if one manages to deceive one's partners then one gains from their labour without having to expend energy. In situations in which all joint activities are carried out together, and information is shared publicly among all members, publicness by itself is an obstacle to free-riding (Sterelny, 2012, ch. 5). But when a group specialises, some activities are carried out by some individuals alone or in

---

[13] In Bicchieri's (2006) social norms play this role by transforming mixed-motive games into mere coordination problems.

subgroups. In these contexts, free-riding can be pulled off more easily because one can hide one's activities from public scrutiny (Zawidzki, 2013, pp. 102-103).

Mindshaping individuals into acquiring, and retaining, intellectual virtues offers a solution to the challenges posed by cognitive heterogeneity and increased opportunities for free-riding that are the necessary by-products of division of cognitive labour and specialisation. I have characterised virtues, including intellectual virtues, as comprising those character traits for which individuals are admired, and which they are encouraged to achieve. Two features of intellectual virtues single them out as solving these two obstacles to coordination in conditions in which individuals would have incentives not to cooperate. First, intellectual virtues promote cooperation among members of the same group because they supply the necessary pro-social intrinsic motivations. Second, they make epistemic dependence on cognitively diverse individuals mutually beneficial.

Intellectual virtues, and virtues in general, are character traits for which individuals are normatively evaluated. Further, these traits involve intrinsic motivations to act in accordance with virtue. Hence, for example, open-mindedness requires that one engages appropriately with alternative viewpoints out of a love for epistemic goods such as knowledge and understanding (Baehr, 2011a). The intrinsic epistemic motivations characteristic of intellectual virtues are in effect prosocial motivations that promote cooperation.[14] The person who acts open-mindedly out of an intrinsic concern for the truth is not likely to subordinate evaluating fairly views that are alternative to her own to gaining a personal advantage.

Whilst intrinsic epistemic motivations are in general pro-social, there are also virtues whose motivations are explicitly concerned with others' access to epistemic goods. These are the so-called virtues of epistemic dependability (Byerly, 2021). They include epistemic benevolence, sincerity, communicative clarity, and the virtues of offering good epistemic guidance to those whom one is teaching. These are those virtues that make an agent ideally

---

[14] In this chapter I presume rather than defend the view shared by several epistemologists that virtues comprise intrinsic epistemic motivations (cf., Baehr, 2011b; Byerly, 2021; Zagzebski, 1996). I take the plausibility of the view that virtues are the product of mindshaping to add further plausibility to this view since the creation of intrinsic motivation is a major feature of mindshaping.

suited to being the kind of person upon whom others can depend to gain knowledge and understanding and to acquire or maintain epistemic abilities and skills.

The practices that shape individuals to acquire and retain intellectual virtues are practices that lead those who have been shaped to see some norms as intrinsically motivating so that they are prepared to follow them even when compliance is costly. These practices include explicit teaching of the norms but also presentations of idealised exemplars by way of fables and other narratives. They also comprise systems designed to enforce compliance with norms by punishing counter-normative behaviours. Those who are intrinsically motivated to be intellectually virtuous are less likely to free ride and are, instead, disposed to cooperate.

Surprisingly, humans are also intrinsically motivated to punish since they are prepared to sanction others even when doing so is to the detriment of the punisher. For instance, cross-cultural studies have shown that human beings tend to be reciprocators. In Ultimatum games they are prepared to take home nothing in order to punish those who offer them little (Henrich & Henrich, 2007).[15] In addition, human agents deploy forms of self-regulation to commit to desires whose realisation would require costly activities. This is way of transforming a mere desire into a value, and potentially into a goal which one is intrinsically motivated to pursue (cf., McGeer, 2015, p. 264). All of these techniques are forms of mindshaping that promote compliance with shared norms that one is intrinsically motivated to follow.[16]

There is some evidence that traits with the intrinsic motivations characteristic of intellectual virtues are the product of mindshaping and have culturally evolved because they

---

[15] Ultimatum games are one-shot interactions between strangers where one player offers a proportion of a fixed sum to the other player. If the second player accepts the offer, the first player keeps the whole sum minus what she has offered to the other player who keeps what he has accepted. If the second player rejects, both get nothing. In this context, it would be rational for the first player to offer as little as possible to the second who rationally should accept any offer not matter how small. This is not how humans usually behave in these circumstances.

[16] These norms are instituted by normative expectations. It is a mistake in my view to think that these norms are in every case mandatory obligations. Instead, some normative expectations are discretionary obligations. These supply reasons to do something and warrant disappointment if they are not complied with. They do not however license the kind of reactive attitudes that are warranted by not doing what one is mandated to do. For example, orders institute mandatory obligations while requests create discretionary ones. Failure to comply with either warrants different responses. In my (2020) I discuss the role of discretionary obligations in testimony.

promote coordination among cognitively heterogeneous individuals (Zawidzki, 2013, ch. 4). I cannot fully defend this empirical claim here but some recent empirical results about the associations between intellectual humility, perceptions of dissimilarity and prejudice are suggestive in this regard. People who measure highly in intellectual humility are less prejudiced than those who are less humble against people with whom they disagree. However, intellectually humble persons are also more inclined to trust selectively and to be distrustful of those whom they judge not to be humble (Alfano & Sullivan, 2021; Colombo et al., 2020). This intellectual virtue would, thus, combine a propensity to open-mindedness within an in-group and a skeptical attitude to people perceived as members of an out-group. This combination of dispositions makes sense if intellectual humility has been selected because it facilitates cooperation within a conformist group that is also cognitively heterogeneous.

I have argued that intellectual virtues, because of their intrinsic motivations, promote cooperation even among agents that have some degree of cognitive heterogeneity and that operate in conditions where opportunities for defection are present. In what follows I explore how intellectual virtues create the conditions in which epistemic dependence, which is an inevitable consequence of specialisation, is largely mutually beneficial.

In order to make this point it is helpful to group virtues into three categories which are not mutually exclusive and might not be exhaustive. The first comprises those intellectual virtues that contribute to carrying out inquiries in an epistemically responsible manner. These include for instance, inquisitiveness and open-mindedness. The second category is that of the virtues of epistemic dependability which I have introduced above. The third category consists of those intellectual virtues that make one the sort of person who is just in their epistemic transactions with those upon whom one might epistemically depend. These virtues will include testimonial justice (Fricker, 2007); the virtues characteristic of good listeners and those who exhibit proper trust in relation to expertise (Zagzebski, 2012).

Intellectual virtues belonging to the first category promote conformism among inquirers that are cognitively heterogeneous because they have differing roles, interests, capabilities and level of skill. Open-mindedness, for instance, is promoted for novices and

experts alike. It is admired in anyone irrespective of context and social role. Such uniformity of motivation, if achieved, would promote the kind of mutual intelligibility that makes coordination easier. Of course, most people often are not very open minded. Nevertheless, mindshaping practices are effective at making people more openminded than they would otherwise be. In this way agents who otherwise have different capabilities and information are more intelligible to each other and thus more capable of coordination than they would if they had no character traits or if their traits were wholly heterogeneous. These epistemic and practical advantages brought about by intellectual virtues are independent of their role in promoting the acquisition of knowledge and understanding in inquiry. Even in cases where open-mindedness might lead one astray from the truth, possessing this trait makes one better able to understand others and to be understood by them (provided that they are also open-minded).

Intellectual virtues in the second category include motivations to promote the acquisition and retention of epistemic goods and cognitive skills in other people. They are thus characteristic of those who can be depended on not to exploit others' vulnerability to deception and misinformation. These are virtues that contribute to trustworthiness because they motivate people to treat other agents' normative expectations of assistance with their epistemic needs as reasons to assist. That is, epistemically dependable people take others' requests for help as reasons to help. For example, the person who is communicatively clear is motivated to communicate clearly because others' normative expectations that she communicates clearly are for her a reason to communicate clearly.

The virtues of epistemic dependability are, thus, the virtues of trustworthiness in the affective sense that others' trust in one is taken by one to be a reason to fulfil their normative expectations (Faulkner, 2014). The acquisition by every agent of these virtues improves communication since no one who has these traits withholds information needed by others that is in one's possession. Enhanced communication thus facilitates coordination, among individuals who, because they carry out distinct tasks in the context of joint epistemic activities, are likely to have access to different bodies of knowledge. In addition, the virtues of epistemic dependability, when combined with the virtues of responsible inquiry, motivate individuals to take up the role of teacher or educator. The practices

designed to instil dependability in all students and apprentices also prepares them for their future roles as educators of the subsequent generation.

Intellectual virtues in the third category include motivations to relate appropriately to those upon whom one depends epistemically. Hence, these virtues are characteristic of those who adopt a trusting attitude to other agents. This kind of trust is not mere reliance but involves the normative expectation that others will do as we trust them to do precisely because of the trust that we invest in them (Faulkner, 2014). The acquisition of these virtues in every agent contributes to better lines of communication since they promote the acquisition from others of knowledge that one needs but does not have. In addition, these virtues when combined with those of responsible inquiry, motivate people to take up the role of student or apprentice. The ability, and willingness, of humans to learn from each other clearly contributes to solving jointly problems through sharing information.

If the considerations offered here are on the right track the acquisition and preservation of intellectual virtues should be seen as the product of mindshaping practices. Humans teach, cajole, encourage and incentivise each other to develop these traits because possessing them has distinctive epistemic advantages for the community of inquiry. In the context of complex problems whose solution requires specialisation and its attended cognitive heterogeneity, virtues provide the motivations required to avoid free-riding, the degree of conformism necessary for mutual intelligibility, but also the motivations to assist others' overcome their epistemic vulnerabilities and to accept help with one's limitations.[17]

The discussion so far has focuses on intellectual virtues as the product of mindshaping, but it also suggests that these same virtues are also tools by means of which humans shape theirs and others' minds. I conclude this section with two examples of intellectual virtues that are themselves instruments of mindshaping: propaedeutic trust and the virtues of the will.

---

[17] Levy and Alfano (2020) have derived very different lessons about individual intellectual virtues and vices from our best theories of human cultural evolution. They argue that cumulative cultural knowledge requires passive imitation on the part of individual agents. They also think that conformism despite its knowledge producing effectiveness is best thought as individual vice. Instead, I wish to highlight the plurality of mindshaping mechanisms and the intellectual virtuousness of adopting a trusting attitude. This plurality also shows that mindshaping is not mere indoctrination since it can contribute to scaffolding the rational agency of its targets.

Adults and teachers sometime trust teenagers, children or students to do something, even though they do not confidently predict that those in whom they put their trust will act as they are trusted to do. By adopting a trusting attitude adults set up normative expectations for their charges to live up to. The setting of these normative expectations is an example of a mindshaping practice which is effective because it creates a new incentive to act as expected if one wants to avoid the costs associated with disappointing those who have some power over one. But the institution of a novel normative expectation also creates a new reason to fulfil the expectation. Provided that the recipient of trust has already acquired some dispositions to be trustworthy, the trusting person by expressing trust makes themselves vulnerable to those whom she trusts. The creation of this novel vulnerability supplies the recipient of the trusting attitude with a novel reason to do as they are trusted. In this way, the virtue of trust is a mindshaping tool that moulds others into matching more closely the virtues of trustworthiness.[18]

The so-called virtues of the will include perseverance, diligence, and self-control among others (Roberts, 1984). These are the moral and intellectual virtues of will power. These virtues are forms of self-regulation that enable one to shape one's mind into committing to sustaining valued behaviours and attitudes. So conceived the virtues of willpower are the dispositions that enable the development of more sophisticated practices of shaping one's mind to match norms that one implicitly or explicitly endorses. These intellectual virtues would thus play an auxiliary role whose primary function is to facilitate the acquisition and maintenance of the other virtues by shaping and keeping one's mind in the shapes characteristic of these other virtues.

4. Concluding remarks

This chapter has demonstrated that intellectual virtue is a product and tool of mindshaping practices in the service of joint epistemic activities that has culturally evolved because it maximises mutual intelligibility and facilitates cooperation. Hence, even though intellectual virtues are individual character traits, their genesis, function, and functioning are wholly social. Virtues are acquired as a result of mindshaping practices that are social in nature.

---

[18] On hope and propaedeutic trust as a mindshaping instrument see McGeer (2008).

These traits have culturally evolved to facilitate coordination in the context of social divisions of cognitive labour. In addition, they are sustained through the continuing operation of empirical and normative expectations that scaffold minds to retain virtuous dispositions and motivations.

Even though I lack the space to address this issue here, the framework that I have presented in this chapter also promises to throw light on the socio genesis of at least some intellectual vices such as intellectual arrogance and servility which are distortions of the virtues of trustworthiness and trust. Arrogant individuals are not disposed to respond appropriately to others' epistemic vulnerabilities, those who are servile have adopted deferential attitudes that make them extremely vulnerable. Intellectual vices such as these might be interpreted as the product of mindshaping strategies that promote success in joint epistemic activities while unfairly distributing the benefits of this success among the participants. It also raises the possibility that other vices might instead be maladaptations that have also emerged from these unfair distributions.

It is often noted that inequities can emerge when divisions of labour are pegged to visible social identities. Coordination is easier if tasks are divided by easily identifiable groups. But such divisions might also mean that some groups gain more than others from the collective successes. The gendered nature of several putative intellectual virtues and vices including intellectual humility and modesty, timidity, servility, and arrogance suggests that something of this sort might be at play in the emergence of intellectual vices.[19]

REFERENCES

Alfano, M. (2013). *Character as Moral Fiction*. Cambridge: Cambridge University Press.
Alfano, M. (2018). A Plague on both your Houses: Virtue Theory after Situationism and Repligate. *Teoria, 38*(2), 115-122. doi:10.4454/teoria.v38i2.
Alfano, M., & Sullivan, E. (2021). Humility in Social Networks. In M. Alfano, M. P. Lynch, & A. Tanesini (Eds.), *The Routledge Handbook on the Philosophy of Humility* (pp. 484-493). London: Routledge.
Baehr, J. (2011a). The Structure of Open-Mindedness. *Canadian Journal of Philosophy, 41*(2), 191-213. doi:10.1353/cjp.2011.0010.

---

[19] Thanks to Mark Alfano for his comments on an earlier draft.

Baehr, J. S. (2011b). *The Inquiring Mind: On Intellectual Virtues & Virtue Epistemology*. Oxford: Oxford University Press.

Bicchieri, C. (2006). *The Grammar of Society: The Nature and Dynamics of Social Norms*. Cambridge: Cambridge University Press.

Bicchieri, C. (2017). *Norms in the Wild: How to Diagnose, Measure, and Change Social Norms*. New York: Oxford University Press.

Byerly, T. R. (2021). *Intellectual Dependability: A Virtue Theory of the Epistemic and Educational Ideal*. London: Routledge.

Colombo, M., Strangmann, K., Houkes, L., Kostadinova, Z., & Brandt, M. J. (2020). Intellectually Humble, but Prejudiced People. A Paradox of Intellectual Virtue. *Review of Philosophy and Psychology*. doi:10.1007/s13164-020-00496-4.

Evans, G. (1982). *The varieties of reference*. Oxford: Clarendon Press; Oxford University Press.

Faulkner, P. (2014). *Knowledge on trust*. New York: Oxford University Press.

Fricker, M. (2007). *Epistemic injustice: Power & the Ethics of Knowing*. Oxford: Clarendon.

Goldman, A. I. (2006). *Simulating minds: the philosophy, psychology, and neuroscience of mindreading*. Oxford ; New York: Oxford University Press.

Gopnik, A., & Wellman, H. (1994). The Theory Theory. In L. A. Hirschfield & S. u. A. Gelman (Eds.), *Mapping the Mind: Domain Specificity in Cognition and Culture* (pp. 257–293). New York: Cambridge University Press.

Henrich, N., & Henrich, J. P. (2007). *Why humans cooperate: a cultural and evolutionary explanation*. Oxford and New York: Oxford University Press.

Klein, O., & Snyder, M. (2003). Stereotypes and Behavioral Confirmation: From Interpersonal to Intergroup Perspectives. *Advances in Experimental Social Psychology, 35*, 153-234. doi:10.1016/S0065-2601(03)01003-7.

Levy, N., & Alfano, M. (2020). Knowledge From Vice: Deeply Social Epistemology. *Mind, 129*(515), 887-915. doi:10.1093/mind/fzz017.

Mameli, M. (2001). Mindreading, Mindshaping, and Evolution. *Biology & Philosophy, 16*(5), 595-626. doi:10.1023/a:1012203830990.

McGeer, V. (2007). The Regulative Dimension of Folk Psychology. In D. D. Hutto & M. M. Ratcliffe (Eds.), *Folk Psychology Re-Assessed* (pp. 137-156). New York: Springer-Verlag.

McGeer, V. (2008). Trust, Hope, and Empowerment. *Australasian Journal of Philosophy, 86*(2), 237-254.

McGeer, V. (2015). Mind-making practices: the social infrastructure of self-knowing agency and responsibility. *Philosophical Explorations, 18*(2), 259-281. doi:10.1080/13869795.2015.1032331.

Miller, C. B. (2014). *Character and Moral Psychology*. Oxford: Oxford University Press.

Miller, R. L., Brickman, P., & Bolen, D. (1975). Attribution versus persuasion as a means for modifying behavior. *Journal of Personality and Social Psychology, 31*(3), 430-441. doi:10.1037/h0076539.

O'Connor, C. (2019). *The Origins of Unfairness: Social Categories and Cultural Evolution* (First edition. ed.). Oxford ; New York, NY: Oxford University Press.

Peters, U. (2019). The complementarity of mindshaping and mindreading. *Phenomenology and the Cognitive Sciences, 18*(3), 533-549. doi:10.1007/s11097-018-9584-9.

Roberts, R. C. (1984). Will Power and the Virtues. *The Philosophical Review, 93*(2), 227-247. doi:10.2307/2184584.

Snyder, M. (1984). When Belief Creates Reality. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 18, pp. 247-305):Cambridge:Academic Press..

Snyder, M., & Klein, O. (2005). Construing and constructing others. *Interaction Studies. Social Behaviour and Communication in Biological and Artificial Systems, 6*(1), 53-67. doi:10.1075/is.6.1.05sny.

Sterelny, K. (2012). *The evolved apprentice: how evolution made humans unique*. Cambridge, Mass.: The MIT Press.

Tanesini, A. (2020). The Gift of Testimony. *Episteme*, 1-18. doi:10.1017/epi.2019.52.

Westra, E. (2020). Folk personality psychology: mindreading and mindshaping in trait attribution. *Synthese*. doi:10.1007/s11229-020-02566-7.

Zagzebski, L. T. (1996). *Virtues of the mind: an inquiry into the nature of virtue and the ethical foundations of knowledge*. Cambridge: Cambridge University Press.

Zagzebski, L. T. (2012). *Epistemic authority: a theory of trust, authority, and autonomy in belief*. Oxford; New York: Oxford University Press.

Zawidzki, T. W. (2013). *Mindshaping: a new framework for understanding human social cognition*. Cambridge, Mass.: MIT Press.

Zawidzki, T. W. (2018). Mindshaping. In A. Newen, L. d. Bruin, & S. Gallagher (Eds.), *The Oxford Handbook of 4E Cognition* (pp. 735-754). Oxford: Oxford University Press.