

(Elwafi et al., 2013; Adams et al., 2014), experience disordered eating cognitions (e.g., fear of weight gain) and not engage in problem eating behaviors (Ferrieira et al., 2011), and experience negative emotion but not engage in avoidance behavior (Wolgast et al., 2011). This evidence suggests that we can enhance valued action without having to change the content of people's thoughts, or, metaphorically, to change what the advisor is saying.

Recommendation 3: Help Young People Notice Inner and Outer Experience to Appreciate Their Present Context and Choose

The noticer (N) refers to a functional class of behaviors that allow us to connect with our inner experience and the physical signals coming from the world around us, and allow those experiences to just be messages, without pushing them away or clinging to them. For example, a young girl may be taught noticer skills to normalize her bodily sensations, become aware of her anger, and learn to allow such feelings to come and go without acting on them; she can use her noticer skills to have anger without needing to hit another student. Or a boy may be taught to recognize the stress in his body when he is studying for a tough exam. He might also notice that when this stress “shows up,” he procrastinates by playing video games. The noticer skill allows him to have the stress, recognize what he usually does, and to either choose what he usually does (procrastinate) or choose something new. Most youth interventions contain a component that targets what we call noticer behaviors. This component can be found in interventions that seek to improve mindfulness (Biegel et al., 2009), awareness and acceptance of sensory input (Kolk, 2006; Pollatos et al., 2008; Farb et al., 2013), skill at describing and labeling emotions (Gottman et al., 1996; Durlak et al., 2011; Kehoe et al., 2014), and skill at responding to feelings in an adaptive and non-impulsive way (Neumann et al., 2010; Hayes et al., 2011).

In the DNA-V model, noticer behavior has five important functions. First, it helps us to tune into our body, detect sensations and identify and label emotions. Second, the noticer helps us to map how our actions affect others. Third, the noticer can be used to tune into the world and what it has to offer. Fourth, when we find ourselves stuck inside thinking (i.e., stuck listening to our advisor), the noticer provides a way to reconnect with the physical realm and loosen the grip of judgements, evaluations, and predictions. Finally, noticer skills involve allowing and being non-reactive to inner experience, which helps young people to regulate their behavior in the presence of difficult emotions. Research suggests that all of these skills are linked to adolescent social and emotional well-being (Ciarrochi et al., 2008, 2011; Rowsell et al., 2016).

As we mentioned in the criticism of content-focused positive psychology, mindfulness interventions can become coercive if their primary purpose is to convince people that the problem resides in their internal states (e.g., “the problem is you’re stressed”) rather than external situations (“the problem is that the teacher is yelling all the time”). This problem of coercion is overcome in DNA-V’s use of the noticer, which puts mindfulness

into the service of growth – building the person’s values and vitality. There is no expectation in the DNA-V model that everybody ‘should’ be mindful, or that mindfulness is somehow a simple fix for any problem. In addition, mindfulness training in DNA-V does not involve pressuring people to feel more positive or less stressed. Indeed, a core component of DNA-V noticer training involves learning to allow and not react to whatever private experience is present, no matter whether it is positive or negative. Thus, mindfulness practice may lead to increases in stress, as, for example, when young people acknowledge their fear of a bully or of failing a test.

Recommendation 4: Help Young People Explore in Order to Develop Skills and Resources, and Expand Their Context

We refer to the final major behavioral class in DNA-V as the discoverer. In contrast to the advisor whose function is to free people from trial and error learning, the function of the discoverer is to engage with the world and learn through trial and error how to interact and manipulate it. Trial and error is inherently risky but functionally adaptive. In infancy, for example, learning to walk requires an infant to stand up, fall down, and stand up again, despite the pain. Play is adaptive for children and teaches growth through risk. In the game of peekaboo, the child must learn to have fear and still seek out the hidden person. In adolescence, risk taking, love of novelty and sensation seeking are key characteristics seen across the species and conceptualized as adaptive behavior that helps juveniles test adult behaviors (Shlegel and Barry, 1991; Spear, 2004; Ellis et al., 2012). Thus, in adolescence, high skilled discoverers engage with the world in ways that helps them build skills, learn through trial and error, and grow. Low skilled discoverers are impulsive and do not learn by trial and error in ways that lead to growth. Discoverer interventions deliberately map to the evolutionary science behind risk taking, and consider how risk taking maps to adaptation. In this way, we minimize coercion by helping young people discover what risk taking actions help them to build value and vitality, rather than pressuring them to reduce risk taking in all contexts.

Discoverer as intervention maps most closely to the positive psychology idea of broadening and building (Cohn and Fredrickson, 2006; Waugh and Fredrickson, 2006; Garland et al., 2010). It also has similar functions to CBT interventions that encourage people to engage in new behaviors in order to help them discover valued activities (Jacobson et al., 1996) and interventions that focus on function and teach people to track the consequences of their behavior (Hurl et al., 2016). In the realm of measurement models, high discoverer skill can be roughly mapped to adaptive expressions of openness to experience (Headey and Wearing, 1989; Davey et al., 2003; Heaven and Ciarrochi, 2012) and curiosity (Kashdan et al., 2009), and low discoverer skill can be mapped to maladaptive forms of sensation seeking (Roberti, 2004).

Whilst discoverer behaviors map roughly to Fredrickson’s (2001) broaden and build behaviors, they differ in important ways. Fredrickson’s notion is that positive affect leads to broaden and build behavior, and there is indeed evidence for this (e.g.,

Garland et al., 2010). However, the contextualistic perspective we outline expands this idea by showing that broaden and build does, and indeed often must, occur in the presence of negative affect. Discovery demands trial and error learning and leaving the safety of pre-existing beliefs behind; fear and exploration often co-occur. Exposure therapy illustrates this point and is perhaps the most empirically validated process of treatment in clinical psychology (Feske and Chambless, 1995). Exposure can be seen as a type of broadening and building. If, for example, a young person is afraid of socializing, he may react to that fear by avoiding all social events. He may never experience the joy of waving to classmates in the mall, or being able to join a gym class. Exposure exercises could help this person to experience the fear and interact with others, so that he can broaden and build his possible response to others. Perhaps as he interacts he will start to notice things he did not notice before, such as others smiling back at him. Discoverer skills can help him engage in new things such as physical exercise and talking with friends; all trial and error learning used to broaden and build, irrespective of current emotional state.

Recommendation 5: Help Young People Take Perspective on Themselves and Others

As seen in **Figure 1**, individual skills (e.g., DNA) are surrounded by higher order skills that we call ‘Self-view’ and ‘Social view.’ These skills are not distinct from D, N, or A. They often involve discoverer (e.g., developing the self/discovering other), noticer (e.g., noticing self-evaluations/other evaluations), and advisor (e.g., beliefs about self and other). What makes self-view and social view distinct is that they involve perspective taking, or more technically verbal frames involving I-YOU, HERE-THERE, and NOW-THEN. These frames can relate entirely to the self (I-NOW, see how I felt different THEN) or to others (I-HERE feel angry, and YOU-THERE feel sad) (e.g., see Barnes and Rehfeldt, 2013; Stewart et al., 2013).

Self-view refers to people’s ability to flexibly and compassionately view their self-concepts as events that come and go rather than as ‘things’ that fix them. The positive psychology constructs most closely linked to self-view are growth mindset (Yeager and Dweck, 2012) and self-compassion (Breines and Chen, 2012; Marshall et al., 2015). Young people with low self-view skills act as if a self-evaluation like, “I am bad at math” defines their essence, the same way wood might define the essence of a chair. In contrast, young people with high self-view skills are able to take a perspective like, “I (NOW)” see that I (THEN) had the thought “I am bad at math.” This perspective allows young people to experience self-concepts as fleeting experiences, rather than ‘real limitations.’ They learn to disregard or set aside unhelpful self-concepts in order to develop and grow. In this way, we see the sense of self can act as a context that affects how DNA behaviors are used. For example, someone who rigidly clings to the self-concept “I am bad at math” will use DNA behaviors to support this self-concept. For example, they may use reasoning/advisor skills to figure out how to get out of doing math homework. Or they may use discover skills to find find

non-math domains where they can develop positive self-concept, and invest all their time and energy in that domain. In this way, they may never discover their true potential in math.

We have thus far focused on individual level interventions, but it is clear that perhaps the most important context for humans is social. Decades of multidisciplinary research in attachment (Bowlby, 1979), psychology (Johnson et al., 2013), animal research (Harlow, 1959), neurodevelopment (Szalavits and Perry, 2010), neuropsychology (Lieberman, 2013), and anthropology (Hrdy, 2009) show that relationships with family and friends are essential to every aspect of our wellbeing. Despite this breadth of knowledge, too often interventions focus on the individual, thereby underestimating the social context. Nowhere is this more erroneous than in adolescence.

In DNA-V, social view points to the influence that social connectedness, relationships and the interdependence of self-with-others has on our ability to use our D, N, and A skills. You may consider this the ‘we view.’ Young people with poor social view skills take negative social interactions personally, and they are unable to step into the shoes of another person and discover that others can and do have different intentions, views, and ways of seeing the world. Social view closely maps to the construct of perspective taking of others, which builds empathy and compassion (Sahdra et al., 2015a; Ciarrochi et al., 2016). For example, a young person with poor social view skills may see another’s intentions as a personal attack, “You deliberately bumped into me” rather than pausing and hearing the other person’s view. Such young people are using their DNA skills for defense rather than for building social connections. Young people with high social view skills are able to adopt a position that “I HERE NOW” is not always the same as “YOU THERE THEN.” They are able to pause and step into another person’s shoes. They learn to reach out, to build relationships. When they do this they learn that we all have our own D, N, and A behavior.

Recommendation 6: Apply the First Five Recommendations to Social Groups as Well as Individuals

Young people are nested within many groups, including family, school, sports teams, and peer groups. These groups can exert a powerful influence on young people. A CPP approach seeks to increase the likelihood of groups engaging in nurturing and cooperative behavior. We aim to create contexts for prosocial adolescent peer groups that discourage bullying and discrimination, and encourage acts of support and kindness.

Using the DNA-V mode, we can suggest the key elements of a group level intervention. The intervention needs to clarify the group values (V), help the group broaden and build their resources and skills by trying new behaviors (D), become aware of how they feel and how feelings can, if reacted to, undermine or support group effectiveness (N), develop more effective group rules (A), take perspective on themselves within the group (self-view) and take perspective on others (social view). Groups involve a continual trade-off between behaviors that are for the good of the group and behaviors that are for the good of the individual. Thus it is important for any group to support

cooperation within the group, while also managing excessive self-interest and supporting cooperation between groups (Wilson et al., 2013). The details of how to achieve this are beyond the scope of this review, but please see Wilson et al. (2013) for more details.

An Example: How a Contextual Approach Transforms Character Strengths

Positive psychology commonly targets character strengths, so we will focus on it here, while noting that our arguments apply to other internal processes such as positive affect. A content focused intervention treats character as 'thing' like with certain properties. Positive traits like optimism are like fuel for achieving outcomes, like magnets for attracting positive people, or are like some magical force that transforms the world. Or, to use an organic metaphor, strengths are like muscles that need to be built up so that we can do the 'heavy lifting' of life. This elemental realist approach (Atkins, 2012) implies that character strengths are inherently good and lead to positive outcomes. After all, who would not want more fuel, magnetism, magical force, or muscle?

There is nothing inherently wrong with taking an elemental realist approach but it can give rise to two difficulties. First, as we described under criticism 1, it can lead us to conclude that the responsibility for dysfunction or disadvantage resides within the individual, rather than reciprocally with their social context. This quote provides an example:

There is no antipoverty tool we can provide for disadvantaged young people that will be more valuable than the character strengths (such as) conscientiousness, grit, resilience, perseverance, and optimism (Tough, 2013, p. 195).

Are strengths more valuable than providing pathways to meaningful jobs, or financial support for education? Will grit be enough to overcome an abusive parent, unsupportive teacher, restricted social mobility, or high unemployment rates? By extolling the value of character traits, one can take the focus away from genuine problems within the whole system. We often see this in schools, where a student is described as lacking persistence, when in fact the environment is quite hostile and unsupportive.

The second potential problem with the content-approach to strengths is that it can treat having more strengths like grit and perseverance as inherently positive, the way that having more physical strength is a positive (Diener, 2003). This fails to consider the function of the strength behavior, the core feature of a contextualist approach. There is increasing evidence that so called strengths can produce negative outcomes in certain contexts. For example, the 'strength' of forgiveness can be associated with decreasing marital satisfaction in some contexts (McNulty, 2008), persistence and grit can be focused on unproductive tasks (McFarlin et al., 1984), self-compassion without conscious attempt to improve oneself can lead to worsening marital relationships (Baker and McNulty, 2011), and believing one can improve oneself, a growth mindset, can lead one to be particularly judgmental of others who fail to change (Kammrath and Peetz, 2011). Without context we can forget that there is no strength that is strong or useful in every context, with every person.

The contextualist approach to strengths does not treat any characteristic as inherently good or bad. It does not even treat character strengths as 'things' with properties. Instead, character strengths are viewed as patterns of behavior that occur in a particular context, and serve a particular function that may be more or less useful. Persistence is adaptive if the task is valued and/or helps the young person to grow, but not when the task is clearly hopeless. Courage is adaptive when a young person is stepping up to do something important, but maladaptive when a young person is driving too fast to impress his friends.

CONCLUSION AND FUTURE DIRECTIONS

More than a decade ago Lazarus (2003b, p. 173) argued that positive psychology "...makes a false dichotomy out of positive and negative rather than integrating them" and "... presents an almost Pollyanna version of the Garden of Eden notion of the good life and good people ...". "This quote is typical of an attack against a caricatured or straw-man version of positive psychology. From our perspective, most formally designed positive education interventions are unlikely to fall into such simplistic traps. However, we believe that current positive psychology is guilty of a more subtle and pernicious set of errors. We have sought to articulate these errors here by illustrating how they are likely to occur in one component of positive psychology interventions – the components that seek to increase positive inner experience and explain behavior in terms of that inner experience. There is now enough evidence to raise some concerns about this approach. Further research is needed to examine when and how positive content interventions backfire and when they work. We would argue that the effect of these interventions depends on context and the values, histories, and needs of the people involved.

We believe that CPP is needed in schools. CPP presents six contextual recommendations that work against cultural forces that can be harmful to the young person.

First, CPP encourages educators to search for the causes of behavior in the environment *and* its interaction with the individual, rather than assuming the behavior is entirely due to something internal, like a lack of character strength or positive attitude. This goes against the commonly made fundamental attribution error, which involves explaining the behavior of others in terms of internal causes. CPP does not assume that adolescents engage in self-destructive or antisocial behavior because they have a negative attitude or a dopamine imbalance. They are not broken. Rather, their troubled behavior can be understood as an adaptation to their environment. We do not seek to fix them, but rather to create environments where they can thrive. We recognize that their attitudes, feelings, and strengths are an important *part* of the causal stream, part of the individual's context, but not the whole context. We must ask: "What is it about their environment that reinforces those attitudes, feelings, and strengths? Can we create a better context for them? Can we help them change their own context?"

Second, CPP suggests that we need to create contexts where individuals and groups can work together to discover what they value, and then act according to those values. This goes against the notion that we should inculcate young people with values, or insist that certain minority groups should act like the mainstream group, or insist that some behaviors like going to university “should” be valued. Instead, we need to offer young people enriched environments, where they can experience a wide range of possible ways of living and discover what works for them. We need to also remember that value occurs at multiple social levels, including individual, family, community, and society, and we need to balance individual self-interest with the interests and values of social groups.

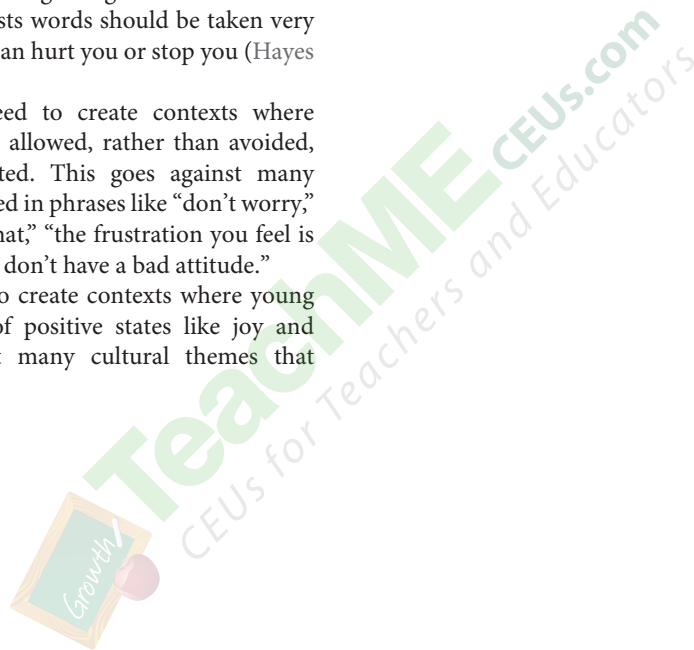
Third, CPP suggests that we need to create contexts where we learn to experience thoughts mindfully, as passing events, rather than as literal truths that must be obeyed. In our model, we might say, “You don’t always have to listen to the advisor. Its advice is not always useful.” This approach goes against the dominant ‘context of literality,’ which suggests words should be taken very seriously and are real things that can hurt you or stop you (Hayes et al., 1999).

Fourth, CPP suggests we need to create contexts where negative feelings are noticed and allowed, rather than avoided, reduced, controlled, or eliminated. This goes against many dominant cultural themes, captured in phrases like “don’t worry,” “you don’t want to think about that,” “the frustration you feel is entirely your own creation,” and “ don’t have a bad attitude.”

Fifth, CPP suggests we need to create contexts where young people can practice letting go of positive states like joy and contentment. This goes against many cultural themes that

advocate that one should “stay positive,” “take a positive attitude,” and “think positive and positive things will happen.” Instead, CPP suggests that we need to learn to let go of the positive states, when holding on to them interferes with what we value. For example, we can’t always feel beautiful, important, loved, and powerful. Clinging to those feelings is characteristic of narcissism (Rhodewalt et al., 1998).

In conclusion, this article has made intervention recommendations based on the best evidence available, but it is important for policy makers to remember that what is considered ‘best’ is not something that is fixed, but rather is something that evolves based on new scientific discoveries. In a way, this paper suggests a set of evidence-based hypotheses about what is best practice, rather than a set of conclusions. We hope this review prompts policy makers to support further research and training on how we can create contexts where all youth, regardless of race, gender, or cultural background, can thrive.





"This course was developed from the open access article: Ciarrochi J, Atkins PWB, Hayes LL, Sahdra BK and Parker P (2016) Contextual Positive Psychology: Policy Recommendations for Implementing Positive Psychology into Schools. *Front. Psychol.* 7:1561. (DOI: 10.3389/fpsyg.2016.01561), used under the Creative Commons Attribution License."