

Kim Levings Consulting, LLC

Structured Emotional Processing:

Meeting the Need for Emotional Regulation in an Era of Expressivity

Kim Levings

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Executive Summary

Over recent decades, organisational life has become fluent in the language of emotion. Leaders are expected to notice, name and share what they feel. This shift corrected a real problem. Emotional suppression, the dominant approach for much of the twentieth century, is among the least effective ways of regulating emotion, with measurable costs to wellbeing and relationships.

But a correction is not the same as growth. This paper argues that the culture has swung from holding emotion in toward letting it out, without building the capacity in between: the capacity to stay steady under the weight of what is felt, and to choose a response rather than discharge one. The result is a growing number of leaders and teams who are emotionally articulate but structurally unsupported. The problem is not too much emotion. It is emotional expressivity without corresponding emotional structure.

Where are we? Research treats emotional awareness, expression, regulation and mature response as separable capabilities. Competence in one does not confer competence in the next. Expression alone can make matters worse: venting amplifies anger, and extended supportive dwelling on problems predicts rising distress. Pressure is what reveals whether emotional structure is present, and in the workplace, the absence of that structure shows up as broken trust, faltering communication, conflict that turns personal and reactivity that spreads through teams.

Where have we come from? Across the twentieth and early twenty-first centuries, cultural permission for emotional expression expanded measurably, as independent data on values, language, stigma and treatment all show. What none of these measures captures is regulation. Each generation corrected the deficit of the one before, but the movement ran along a single axis. What swung was permission. What was never systematically built was structure. The paper treats generations as formative environments, not personality types, and makes no judgement of any cohort.

Where do we go from here? The paper proposes **Structured Emotional Processing**: the practised capacity to work with emotional activation in the gap between feeling and response. It is carried out through **P.A.C.E.** (Pause, Affirm, Challenge, Encourage), applied both internally, to a leader's own reactions, and externally, in conversation with others. Each step draws on established research: implementation intentions and self-distancing for Pause, affect labelling and interpersonal validation for Affirm, cognitive reappraisal for Challenge, and self-compassion and psychological safety for Encourage. Practised repeatedly, the deliberate response becomes the automatic one. The aim is not a lifetime of effortful self-control, but trained responses that hold under pressure.

The paper is candid about its limits. The individual components of P.A.C.E. are well evidenced. The Encourage step and the sequence itself have not yet been tested directly, and these are identified as the research agenda.

Awareness and expression are real gains, and they should be kept. The task now is to build the structure underneath them, so that when pressure comes, that structure holds.

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Problem Statement (*Where are we?)*

Over the past several decades, organisational life has become fluent in the language of emotion. Leaders are expected to notice what they feel, to name it, and increasingly to share it. Vulnerability is framed as a leadership strength, and wellbeing has moved from the margins of HR to the centre of the leadership conversation.

Much of this shift corrected something real. For most of the twentieth century, the dominant way of managing emotion at work was suppression. The research on that approach is now clear: it is among the least effective ways of regulating emotion, with costs to wellbeing, memory and relationships (Gross, 1998; Srivastava et al., 2009). A culture that made room for emotional awareness and expression was responding to a genuine deficit.

But a correction is not the same as growth. The central premise of this paper is that we did not gain ground. We swung. The capacity to feel and to say has expanded. The capacity to hold has not been built at the same rate. By holding, this paper means staying steady under the weight of what is felt and choosing a response rather than just discharging one.

What pressure reveals

A concrete wall looks the same whether it is reinforced or not. The difference only becomes visible under load. Whether it holds is determined not by its surface but by what was built into it long before the additional strain arrived.

Emotional capability works the same way. In calm conditions, almost anyone can appear composed. Pressure is what reveals the internal structure. Under strain, behaviour is often generated before deliberation completes. Fast, cue-triggered responses finish first, and slower, deliberate processing arrives after the moment has already turned (see Research Paper 2). Pressure does not create reactivity. It surfaces whatever has been practised.

This is why the question facing leaders is not whether they understand their emotions in a quiet moment. It is what their responses are made of when the load arrives.

Emotional awareness is not emotional maturity

The popular view treats emotional maturity as a single spectrum: more awareness leads to more expression, and more expression leads to more maturity. The research does not support that assumption. Awareness, expression, regulation and mature response are separable capabilities, each with its own evidence base, and competence at one does not imply competence at the next (Lane & Schwartz, 1987; Gross, 2015; Bonanno & Burton, 2013).

Knowing what one feels matters. Putting a feeling into words can itself begin to reduce its intensity (Lieberman et al., 2007; Torre & Lieberman, 2018). But naming is where regulation can begin, not where it ends. Awareness that stops at identification leaves the reaction intact. Expression of a reactive state can make matters worse. Rehearsing anger tends to sustain and amplify it rather than release it (Bushman, 2002). Even supportive expression carries a cost when it becomes extended, mutual dwelling on problems. In studies of adolescent friendships, this pattern, known as co-rumination, deepened closeness. Among girls in particular, it also predicted rising symptoms of depression and anxiety over time (Rose, 2002; Rose, Carlson & Waller, 2007).

A leader can be highly aware and even highly expressive, while still being poorly regulated. That configuration is increasingly common, and it is easy to mistake for maturity because it sounds like maturity.

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The cost of reactivity

What pressure surfaces does not stay contained. Reactivity is the outward expression of that internal state, and it shows up in personal and professional life alike. Its effects also compound.

- **Trust breaks down.** Trustworthiness rests on how others perceive a person's ability, benevolence and integrity (Mayer, Davis & Schoorman, 1995). Trust in leadership, in turn, is associated with performance, commitment and satisfaction (Dirks & Ferrin, 2002). Benevolence and integrity are tested precisely when a leader is under strain, and a reactive moment can undo what many steady ones built.
- **Communication falters.** Teams learn from what happens when someone speaks up. Psychological safety is the shared belief that it is safe to take interpersonal risks, such as raising a concern, disagreeing or admitting error (Edmondson, 1999). A leader's reactivity teaches the opposite lesson, and people adjust by saying less.
- **Conflict turns personal.** Disagreement about the work can strengthen a team. Across 117 project teams, task conflict was associated with better performance only where psychological safety was high (Bradley et al., 2012). Conflict between people, by contrast, is consistently harmful (de Wit, Greer & Jehn, 2012). Reactivity is what converts the first kind of conflict into the second.
- **Reactivity multiplies.** A reaction rarely ends with the person who has it. Emotional states spread through groups, and a leader's emotional state is especially contagious (Barsade, 2002; Sy, Côté & Saavedra, 2005). A single unregulated moment can set the tone for a meeting, a team or a relationship.

The need

What is needed is the reinforcement underneath expression: a repeatable, practised way of meeting pressure that neither shuts feeling down nor simply lets it out. This paper calls that capability **Structured Emotional Processing**[1]: the practised capacity to work with emotional activation in the gap between feeling and response, acknowledging the emotion, examining the meaning attached to it, and consolidating a chosen response, rather than suppressing it or discharging it. To explore why that structure was never built, it helps to look at where we have come from.

[1] The term *emotional processing* has a longstanding clinical and psychological usage. Rachman (1980) described it as the process by which emotional disturbances are absorbed and decline until they no longer disrupt behaviour. Foa and Kozak's (1986) emotional processing theory, which helped provide a theoretical foundation for exposure-based treatment of fear, conceptualises therapeutic change as the modification of the memory structures underlying fear. Structured Emotional Processing builds on the broader concept of emotional processing but applies it in a different domain: it is a non-clinical, practice-based framework for creating structure around emotionally charged communication in leaders and teams. It is not a treatment model and does not seek to diagnose or treat psychopathology.

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Background Context: The Generational Pendulum

Where have we come from?

A note on how generations are used here:

Generational labels are a contested tool, and this paper references them with care. A 2020 review by the US National Academies of Sciences, Engineering, and Medicine concluded that generational categories cannot adequately inform workforce decisions. It found that differences attributed to generation are more often explained by age, career stage and broad social change, and that individuals within a generation differ as much from one another as from people in other cohorts (National Academies, 2020; see also Rudolph et al., 2021).

This paper accepts that critique. It makes no claim that people born in one decade feel differently from people born in another. Its claim is about environment. Following a long sociological tradition, it treats a generation as a formative context, not a personality type (Mannheim, 1928/1952; Ryder, 1965). Elder's longitudinal study of children who lived through the Great Depression showed that the same historical event, meeting people at different developmental stages, produced materially different life outcomes (Elder, 1974/1999). What matters is what each cohort met at a formative age. That includes what was permitted, what was taught, what was rewarded and what was left unbuilt.

Read this way, the argument that follows describes a culture that changed, not a cohort that is deficient. It is also why the framework proposed later does not depend on generational categories at all. Structured Emotional Processing, as introduced in this paper, describes an individual capability, and the generational account explains why that capability went underdeveloped, not how it works.

The swing

- **The Silent Generation (born 1928–1945)** was raised under behaviourist child-rearing advice. The prevailing expert guidance warned parents against affection, on the theory that emotional warmth produced dependency (Watson, 1928). Emotional restraint and obedience were the professional consensus, not merely family habit. Survey data on values place this cohort firmly at the materialist end of the spectrum, prioritising security over self-expression (Inglehart, 2008). The fairest summary is not an absence of feeling but an absence of permitted channels. Regulation happened largely through suppression (in Gross's sense: inhibiting the outward display of an emotion already underway; Gross, 1998), a response-focused strategy that manages emotion after it has formed.
- **Baby Boomers (born 1946–1964)** were the first generation raised under expert advice that affection was good for children (Spock, 1946), supported by the emerging science of attachment. But the shift was in what parents were told to *give*, not in what children were permitted to *express*. This is also the cohort in which self-expression values first appear at scale in survey data. Inglehart's original observation of intergenerational value change was precisely this contrast (Inglehart, 1971). Permission rose sharply at the level of values. It lagged at the level of family practice.

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- **Generation X (born 1965–1980)** grew up during the peak of US divorce rates and the mass entry of mothers into paid work, without a matching expansion of childcare. Time-diary data spanning four decades show parental childcare time declining for about thirty years before rising sharply from the mid-1990s (Ramey & Ramey, 2010). Gen X childhood sits in that trough. Declining community and associational life across the same period reinforces the picture (Putnam, 2000). No direct measurement of this cohort's emotional expressivity exists. The structural evidence, however, supports a reading of *privatised regulation*: feelings managed alone, with less adult and institutional containment than generations on either side.
- **Millennials (born 1981–1996)** were raised as parenting intensified. Middle-class parents increasingly cultivated children's talents and reasoned with them as negotiating partners (Lareau, 2003). Child-rearing became expert-guided, emotionally absorbing work (Hays, 1996), and rising economic inequality drove parents toward more intensive styles (Doepke & Zilibotti, 2019). As this cohort reached adulthood, therapy moved into the mainstream and mental-health stigma declined measurably. The expansion of permission and vocabulary is well documented. No comparable evidence documents a matching change in regulatory capability, largely because nobody has measured it that way.
- **Generation Z (born 1997–2012)** is the first cohort to meet smartphones and social media in early adolescence, and the first taught emotional literacy as a formal part of the school curriculum. This cohort has more emotional vocabulary, more permission and more institutional support for expression than any before it. Measures of distress have also risen. The causes of that rise are fiercely contested (Haidt, 2024; Odgers, 2024; Orben & Przybylski, 2019), and this paper takes no position on them. The point is narrower: expanded expression has not, on its own, delivered the steadiness it was expected to.
- **Generation Alpha (born c. 2013–2024)** is the first cohort for whom universal school-based social and emotional learning (SEL) is the norm from the earliest years (Cipriano et al., 2023). Any claim about their adult emotional lives is projection. If the pattern described here holds, their central challenge will be governance rather than identification. They will not lack the words for what they feel. What they may lack is the structure to carry it.

What the evidence shows

The generational narrative is illustrative. The underlying shift in the cultural environment, however, is independently measurable, across several separate data series.

Self-expression values rise steadily from older to younger birth cohorts in fifty years of cross-national survey data (Inglehart, 2008). Analysis of millions of books published between 1850 and 2019 shows emotion-related language reversing its long decline in the 1980s and accelerating from around 2007 (Scheffer et al., 2021). Part of that effect may reflect the increasing informality of published writing (Sun, 2022), so it is best read as a shift in public language rather than in how people think. Public stigma toward depression declined between 1996 and 2018, a change the researchers attribute largely to generational replacement (Pescosolido et al., 2021). The share of US adults receiving mental health treatment rose from 19.2% to 23.9% between 2019 and 2023 (Centers for Disease Control and Prevention, 2024). And SEL has become a global schooling standard with a robust evidence base: it demonstrably improves the skills and outcomes it targets (Cipriano et al., 2023; Durlak et al., 2011).

Taken together, these data support one conclusion with reasonable confidence. Cultural permission for emotional expression expanded substantially across the twentieth and early twenty-first centuries, and the institutional infrastructure supporting it expanded alongside it.

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Why a pendulum and not a progression

What none of these series measures is regulation, the capacity to change the course of an emotional response once it has begun. SEL research demonstrates gains in recognition and skill, measured in school settings (Cipriano et al., 2023). It does not measure what happens under sustained adult pressure, at scale, over a working life.

That gap is the heart of this paper's argument. Each generational correction addressed the deficit of the one before. Behaviourist restraint gave way to affection, affection to permission, permission to vocabulary, and vocabulary to curriculum. Each was a genuine gain. But the movement ran along a single axis, from holding emotion in, toward letting it out. The cultural default moved from one response-focused approach, suppression, to expression with no antecedent step at all. What swung was permission. What was never systematically built was structure.

A pendulum that swings from one extreme toward the other has not grown. It has moved. The task now is not to swing it back. It is to build what the swing left out.

Note: The evidence in this section is drawn from US and Western European data, which offer the most extensive longitudinal series available. The pattern it describes is not specific to those societies. The swing away from suppression, and the structure left unbuilt behind it, is a pattern whose timing and shape vary with cultural history. In South Africa, for example, emotional formation was shaped by apartheid, by the Soweto uprising and the states of emergency, and by the post-1994 "born free" generation. That history cannot be mapped onto US generational categories. The P.A.C.E. mechanism is common across contexts, and its application to specific cultural histories is developed in separate work.

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Proposed Solution (*Where do we go from here?)*

If the problem is expressivity without structure, the solution is not less emotion. It is a structure for what happens between feeling something and doing something. This paper calls that space *the gap*, and proposes **Structured Emotional Processing**, practised through the P.A.C.E. framework, as the way of using it.

The gap

Between emotional activation and behavioural response, there is a gap. Under pressure it is often very small. Fast, cue-triggered responses tend to complete before slower, deliberate processing has engaged (see Research Paper 2). This is not a failure of character, and it is not an older part of the brain overriding a newer one. That account of brain organisation has been set aside in the research literature. It is simply that when a present cue matches a pattern laid down long ago, the practised response finishes first.

What gets laid down is more than a memory of an event. Lane and colleagues describe an integrated structure with three interacting parts: the memory of what happened, the meaning made of it, and the emotional response attached to both. Retrieving any part of that structure brings the rest (Lane et al., 2015). This is why a present-day comment can produce a response calibrated to something decades old. The cue retrieves the meaning, and the meaning carries the response.

The gap is therefore where the meaning can be worked on before the response is delivered. Two things need to be said about what the gap is not.

The gap is not passive. Pausing is not the same as waiting. Reflecting on a difficult moment from an immersed, first-person stance predicts more rumination, not less. Reflecting from a distanced stance predicts lower emotional and physiological reactivity and less rumination over time, and the benefit comes from what people think about, not simply from the delay (Ayduk & Kross, 2010; Kross & Ayduk, 2011). A gap that is only a delay can make things worse.

The gap is not suppression. Suppression acts on a response that has already formed, holding back its outward expression while the internal state carries on. It is the best-studied response-focused strategy, and it consistently produces the poorest outcomes. Strategies that act earlier, before the response is fully formed, consistently produce the best. Reappraisal, which changes the meaning of the situation, is the most robust of these (Gross, 1998, 2015; Webb et al., 2012; see Research Paper 3).

This is the field's own vocabulary for the argument of this paper. The cultural swing moved from one response-focused approach, suppression, to expression with no antecedent step at all: no structure acting before the response forms. Structured Emotional Processing, practised through P.A.C.E., is proposed as that missing structure.

P.A.C.E. - A Structure for the Gap

P.A.C.E. is the practice through which Structured Emotional Processing is carried out: a four-step sequence of **Pause, Affirm, Challenge, Encourage.** It works in two directions:

- **Internally**, a leader applies it to their own activation: noticing it, naming it, examining the meaning behind it and consolidating the new response.
- **Externally**, a leader applies it in the exchange with another person: making room before responding, acknowledging what the other person feels, questioning the meaning together rather than the person, and reinforcing that the relationship holds.

The two directions use the same mechanism. The internal direction regulates the leader. The external direction shapes the emotional conditions of the conversation and, through the leader's outsized influence on a group's emotional tone, of the team (Barsade, 2002; Sy, Côté & Saavedra, 2005; see Research Paper 5).

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Pause

Pause creates the gap deliberately rather than leaving it to chance. The research is specific about how. An intention to pause is a goal. A pause specified in advance, in the form "when this cue appears, then I will do this specific thing", is an *implementation intention*. Across 94 independent tests, implementation intentions carried a medium-to-large advantage over intentions alone (Gollwitzer & Sheeran, 2006). Their mechanism is exactly what Pause requires: a chosen response is linked to a situational cue so that it becomes available automatically, at the moment it is needed.

The distancing research adds a second requirement. Pause must change perspective, not only tempo. The question in the gap is not "how do I feel about this?" but "what is happening here, seen from a step back?" A similar move appears in practitioner work. The late David Emerald's TED* (The Empowerment Dynamic) proposes asking "What do I want?" in that moment, shifting attention from the problem to the desired outcome and away from the reactive patterns that fuel workplace drama (Emerald, 2016). Either question becomes an implementation intention when it is decided in advance and linked to a known cue.

Internally, Pause is the pre-planned interruption: a known cue, a known action, a step back. *Externally*, it is the refusal to answer reactivity with reactivity. It gives the other person's activation room without adding to it.

Affirm

Affirm acknowledges the emotion as real and understandable. It is often treated as a courtesy before the real work begins. The research treats it as regulation in its own right. Putting a feeling into words reduces activity in the brain's threat-response regions, and affect labelling has effects comparable to reappraisal across experiential, physiological and behavioural measures, without feeling effortful (Lieberman et al., 2007; Torre & Lieberman, 2018; see Research Paper 2).

Internally, Affirm is understanding oneself. It is the honest acknowledgement that "this is frustration, and it makes sense given what I carry into this moment." That acknowledgement is what distinguishes Affirm from suppression. The feeling is neither denied nor obeyed. It is named and understood.

Externally, Affirm is where many conversations are won or lost. When a person's emotion is dismissed, corrected or argued with, communication tends to break down and conflict escalates. When it is acknowledged, the person no longer needs to defend the feeling, and the conversation can move to its substance (Shenk & Fruzzetti, 2011; see Research Paper 5).

One distinction matters here. Affirm validates the *emotion* and the understandable reasons behind a *reaction*. It does not endorse every behaviour the reaction produced. A leader can affirm that anger makes sense while still addressing what was said in anger. The Challenge step is where that happens.

Challenge

Challenge examines the meaning attached to the moment. It is reappraisal in practice. A meta-analysis of 48 neuroimaging studies found that reappraisal works by recruiting control regions to modify the *meaning* of the situation, and that the altered meaning in turn reduces the threat response (Buhle et al., 2014). Among the strategy families in the regulation literature, changing the meaning outperforms changing where attention goes and changing what is shown (Webb et al., 2012; see Research Paper 3). The lever is the story, not the feeling.

The form of the question matters. Reflection and insight are different things. Engaging more in self-reflection tracks with higher anxiety, while insight, clarity about what is actually true, tracks with better regulation and flexibility (Grant, Franklin & Langford, 2002; see Research Paper 4). Challenge is therefore framed as an insight-producing question: *What is actually true here? What else could this mean? What does this situation require of me?* It is not an open invitation to keep feeling.

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Internally, Challenge questions the story the cue retrieved. *Externally*, it is accountability delivered as a shared question about reasoning, rather than a verdict on the person (see Research Paper 5). Because Affirm has come first, Challenge addresses the story, not the person and the sense of self.

Note: The Challenge step corresponds to the Challenger and Coach roles in TED The Empowerment Dynamic (Emerald, 2016).*

Encourage

Encourage consolidates the change. It is the cheerleading step: recognising that progress is being made and that what is being said and done is moving toward steadiness.

Internally, Encourage is self-evaluation without shame, acknowledging the effort a different response required. The self-compassion research supports this direction. Treating oneself with understanding rather than harsh judgement is associated with lower levels of psychological distress (Neff, 2003; MacBeth & Gumley, 2012).

Externally, Encourage keeps the exchange in safe territory. Once a meaning has been challenged, the other person needs to know that the challenge has not negatively impacted their standing in the relationship. That signal is what makes candour sustainable. Psychological safety, the shared belief that interpersonal risk will not be punished, is built through repeated leadership behaviours that demonstrate it, not through assurances (Edmondson, 1999; see Research Paper 5). Encourage is one of those behaviours.

There is also a theoretical case for Encourage's place at the end of the sequence. Research on memory reconsolidation suggests that lasting emotional change requires a new emotional experience to be incorporated into the reactivated memory structure (Lane et al., 2015). Encourage is plausibly where that new experience is supplied: the challenge was met, and the relationship held. A new, growth-oriented pattern is internalised.

From effort to automatic

Applying P.A.C.E. takes intention and effort, especially at first. It is slower than reacting, and it runs against well-practised patterns. But the goal is not a lifetime of effortful override.

The self-control research makes this point clearly. People with high self-control do not resist their impulses more often in daily life. They resist *less*, because beneficial habits have taken over the work that effortful inhibition would otherwise do (Galla & Duckworth, 2015; see Research Paper 4). Implicit, automatic regulation is not a lesser form of regulation. It is a necessary part of healthy emotional life (Gyurak, Gross & Etkin, 2011; see Research Paper 4).

This is how P.A.C.E. is designed to work over time. In the short term, the deliberate response overrides the reactive one. In the long term, the deliberate response, practised repeatedly under real pressure, becomes the new automatic one. This matches the mechanism of implementation intentions, which delegate a chosen response to cue-triggered control (Gollwitzer & Sheeran, 2006). It also matches the clinical model of change, in which a new way of responding is reinforced by practice across contexts (Lane et al., 2015).

The popular image of willpower as a muscle that tires with use and strengthens with exercise is only half right. The idea of willpower as a depletable reserve has not survived large-scale replication (Hagger et al., 2016; see Research Paper 4). What does survive is skill built through practice. Every deliberate response under pressure is a rehearsal for the next automatic one. Ultimately, the desired outcome is not to live in the gap forever. It is to train and adopt patterns of response before the gap is needed.

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What is established and what is not

P.A.C.E. is built on well-evidenced components. The benefits of pre-specified if-then plans, distanced reflection, affect labelling and reappraisal are each graded as strong (see the evidence tables in Research Papers 2 and 4). Two elements are stated with more caution. Encourage is theoretically grounded but not directly tested as a step in a regulation sequence. And while each step is supported individually, the sequence as a whole has not yet been tested as a unit. This paper presents P.A.C.E. as an evidence-informed framework, and names these as the areas where the evidence base is still being built.

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Conclusion

This paper has argued that the cultural movement away from emotional suppression was a genuine correction, but not necessarily growth. The capacity to feel and to say has expanded, which is a good thing. The capacity to hold and process emotions, however, has not been built alongside it. The problem is not too much emotion. It is emotional expressivity without corresponding emotional structure. Structured Emotional Processing is proposed as that structure, practised through P.A.C.E.: a way of using the gap between emotional activation and behavioural response, applied both within oneself and between people.

A step, not a destination

P.A.C.E. is not offered as the final word on emotional maturity. It is one more step in a longer journey toward healthy emotional foundations in relationships, personal and professional alike. The generational account in this paper describes a pendulum. Each generation corrected the deficit of the one before, and each correction was real. This framework sits within that same history. Its contribution is not to end the movement, but to change its direction: from swinging between holding emotion in and letting it out, toward building the capacity to hold it and then process it in a healthy manner.

That capacity is built over time. As the research on habit shows, the deliberate response practised under pressure gradually becomes the automatic one (Galla & Duckworth, 2015; see Research Paper 4). Maturity, on this view, is not a state that is reached. It is a pattern that is practised.

The workplace as a primary application

Workplace communication is where the absence of emotional structure is most visible and most costly, and where P.A.C.E. has its most immediate application. The ten workplace applications in Research Paper 5 show the same pattern repeatedly. Accountability improves reasoning when it is delivered as a question rather than a verdict. Feedback fails when it becomes a threat to the self. Conflict strengthens teams only where psychological safety is high. Trust is tested precisely when a leader is under strain. And both emotional contagion and validation show that a leader's regulation, or lack of it, does not stay with the leader. It shapes how every person in the room responds.

In each case, the evidence points to the same conclusion. The quality of workplace relationships depends less on how much emotion is expressed than on what is done with it in the gap. Regulation is not a private wellbeing concern. It is a leadership capability with direct consequences for trust, candour and performance.

An evidence base still being built

This paper has been deliberately candid about the limits of its evidence. The individual components of P.A.C.E. rest on strong research: implementation intentions, distanced reflection, affect labelling, reappraisal, with interpersonal validation supported by consistent experimental evidence. Other elements do not yet. The Encourage step is theoretically grounded but untested as part of a regulation sequence. The sequence as a whole has not been tested as a unit. And the transfer of clinical models of emotional change into non-clinical workplace settings remains plausible but unestablished (see Research Paper 2).

These are not weaknesses to conceal. They are the research agenda. Frameworks like P.A.C.E. make the questions testable: whether the sequence outperforms its individual components, whether Encourage contributes to lasting change, and whether practised regulation measurably changes team outcomes over time. The more such structured behavioural approaches are applied and studied, the sooner the field can confirm, refine or correct what currently makes practical and theoretical sense.

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Beyond generational labels

This paper has drawn on generational history to explain why emotional structure went underdeveloped. It has done so with care, because the labels that accompany generational discussion remain a real concern. Too often, conversations about emotional processing slide from describing formative environments to judging cohorts: one generation cast as emotionally closed, another as emotionally fragile. The evidence does not support those judgements. Differences in work attitudes between generations are small (Costanza et al., 2012), and individuals within a generation differ as much as individuals across them (National Academies, 2020; see Research Paper 1).

P.A.C.E. offers a practical alternative to generational labelling. Because it works on the individual's own story, rather than on assumptions tied to their birth year, it gives leaders a way to meet the person in front of them as they are. The question is no longer which generation a person belongs to. It is what their response is made of, and how it can be strengthened.

From expression to structure

The gains of the past decades are real. Leaders and teams can now recognise and name emotion in ways earlier generations were rarely permitted to. That vocabulary should be kept. But vocabulary is not structure, and awareness is not the same as the capacity to act well under pressure.

Structured Emotional Processing is the capability that sits between the two. It does not ask people to feel less or say less. **It asks them to do something deliberate with what they feel:** to pause and step back, to acknowledge the emotion honestly, to examine the meaning attached to it, and to consolidate a response that serves the situation and the relationship. Practised through P.A.C.E., within oneself and with others, it turns **emotional awareness into emotional steadiness.**

Like any capability, it is built through practice rather than insight alone. Each deliberate response under pressure makes the next one more automatic, until the structure is simply part of how a leader meets difficulty.

Pressure will always reveal what has been built. The task now is to build the structure deliberately, so that what pressure reveals is steadiness rather than reaction.

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APPENDIX

Research papers were prepared as the evidence base for the P.A.C.E. body of work. References to "the publication" denote the related body of work, including an e-book, future articles, training products, and this white paper.

- Research Paper 1 - Generational Cultural Experiences, 19
- Research Paper 2 - Neuroscience Foundations, 27
- Research Paper 3 - Emotional Regulation, 34
- Research Paper 4 - Reflective vs. Automatic Processing, 42
- Research Paper 5 - Psychological Safety and the Workplace, 51

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Research Paper 1:

Generational Cultural Experiences

Everything outlined below is organised on the foundation principle that a generation is a formative environment, not a personality type. Each profile describes what a cohort *met* at a formative age, not what its members *are*. As such, this document provides background and anchoring in a legitimate and long-established academic tradition.

PART 1 — Primary Scholarly Sources

The following four sources of information were consulted in association of generational experiences and outcomes in the realm of emotional expression.

Mannheim, K. (1928/1952). The problem of generations. A foundational sociological text. Mannheim's core insight: a generation is formed not by shared birth years but by shared *location in historical time* during the formative years — roughly adolescence to early adulthood — when worldview crystallises. Crucially, Mannheim also argued that a single cohort contains multiple "generation units" responding differently to the same events. People within a generation vary enormously. Mannheim said this in 1928.

Ryder, N. B. (1965). The cohort as a concept in the study of social change. *American Sociological Review*, 30(6), 843–861. Established the birth cohort as the mechanism by which societies change: social change happens substantially through cohort *replacement*, not through individuals changing their minds.

Elder, G. H., Jr. (1999). *Children of the Great Depression: Social change in life experience*. Westview Press. (Original work published 1974 by University of Chicago Press.) The foundational empirical demonstration of concepts named in the publication. Elder followed 167 individuals born in 1920–21 in Oakland from elementary school into the 1960s, later comparing them to a Berkeley cohort born 1928–29. The comparison produced a natural experiment: the same historical event struck the two cohorts at different developmental stages and produced materially different life outcomes.

Elder's principle of *historical time and place* — that lives are shaped by the era and location in which they are lived — supports the underlying thesis, demonstrated longitudinally over decades and foundational to the field of life course theory. The younger Berkeley cohort, hit by the Depression in early childhood rather than adolescence, fared differently. Timing within childhood mattered.

Inglehart, R. (1971; 1977; 2008). *The Silent Revolution*, and Changing values among Western publics from 1970 to 2006, *West European Politics*, 31(1–2), 130–146.

Inglehart's intergenerational value-change theory, tested across decades of World Values Survey and Eurobarometer data in more than 80 societies. The finding: among older cohorts, *materialist* values emphasising economic and physical security predominated; moving from older to younger birth cohorts, *post-materialist* values emphasising **autonomy and self-expression** became increasingly widespread. Inglehart argued from the outset that this was generational replacement rather than life-cycle change, and by 2008 concluded the predicted changes had occurred, supported by three independent analytic approaches.

Inglehart's measured construct *is referred to as self-expression values*, the very topic being addressed in the publication. The construct rises monotonically across birth cohorts, and it is drawn from nationally representative cross-national survey data spanning fifty years.

Although Inglehart's theory is contested, and recent work questions whether the trend has stalled or reversed under renewed economic insecurity, and age-period-cohort disentangling remains disputed, it remains the strongest available evidence for cohort-level value change at the time of publication.

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PART 2 — Generational Cohort Profiles

Birth-year boundaries follow Pew Research Center where Pew has set them. Note: Pew announced in 2019 it would not define boundaries for post-Gen Z cohorts; Gen Alpha's boundaries come from McCrindle Research, a demographic consultancy, not an academic body.

THE SILENT GENERATION (born 1928–1945)

Formative forces

1. The Great Depression and its aftermath — material scarcity as the organising fact of childhood
2. The Second World War, experienced as children or adolescents on the home front
3. Post-war conformity and the organisation-man era; institutional loyalty as a life strategy
4. Rigid gender and racial hierarchies, largely unquestioned in the mainstream culture of their childhood
5. Small cohort size — they entered a labour market with little internal competition

Parenting trend they received: The behaviourist era. **Watson, J. B. (1928).** ***Psychological care of infant and child*** advised parents against affection, kissing, and sitting children on the lap, on the theory that emotional warmth produced dependency. Schedule feeding, emotional restraint, and obedience were the expert consensus. This is not folklore — it was the prevailing professional advice, and it is the direct evidential basis for the "be seen, not heard" reference.

Socioeconomic shifts Scarcity in childhood followed by the strongest sustained economic expansion in modern history during their working lives. Homeownership, pensions, and lifetime employment became achievable in a way they had not been for their parents. Elder's work documents that many Depression-era children fared unusually well in adulthood.

Emotional expressivity and regulation. Elder's longitudinal data on this cohort documents the relationship between deprivation, family process and later-life functioning, including work on combat experience and emotional health in later life. Inglehart's cohort data places them decisively at the materialist end of the values spectrum — security over self-expression. Direct measurement of emotional expressivity in this cohort during their childhood does not exist; nobody was measuring. It should be noted that human behaviour, specifically in the context of emotional expressivity, was not always accurately measured, supported, or documented. Sources cited in this section provide a moderate level of research substantiality.

The honest characterisation: high regulation by suppression, low expressive vocabulary, low help-seeking. In Gross's terms, response-focused regulation as the cultural default. Not an absence of feeling — an absence of permitted channels.

BABY BOOMERS (born 1946–1964)

Formative forces

1. Unprecedented post-war prosperity and the emergence of a distinct youth culture
2. Civil rights, Vietnam, and the counterculture — the mass politicisation of a cohort
3. The arrival of television in the home as the first shared mass-media childhood
4. Second-wave feminism and the beginning of the reordering of family roles
5. Enormous cohort size, producing lifelong competition for everything from school places to promotions

Parenting trend they received: The pivot. **Spock, B. (1946).** ***The Common Sense Book of Baby and Child Care*** displaced Watson and told parents to trust their instincts and show affection. Simultaneously, **Bowlby's attachment**

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theory and Harlow's primate research established that emotional connection was a developmental necessity rather than an indulgence.

This is the first generation raised under expert advice that said affection was *good for children*. But the shift was in what parents were told to *give*, not in what children were permitted to *express*. This asymmetry is important to the context of the publication, as it is supportive of the statement that this generation felt more than their parents did and still had nowhere to put it.

Socioeconomic shifts: Rising real wages, mass suburbanisation, and the expansion of higher education. Married women's labour force participation begins its steep climb. Divorce rates start rising in 1960.

Emotional expressivity and regulation: This is the cohort where post-materialist and self-expression values first appear at scale in survey data — Inglehart's original 1971 observation was of exactly this generational contrast. The measured shift is real and it starts here.

The honest characterisation: expressive permission rising sharply at the level of *values*, lagging at the level of *family practice*. The family implications mentioned in the publication are well supported by the Inglehart data.

GENERATION X (born 1965–1980)

Formative forces

1. The divorce peak — the crude US divorce rate hit its all-time high of 5.3 per 1,000 in 1981, and the refined rate peaked at 22.6 per 1,000 married women around 1979–80. Gen X childhood sits precisely on this peak.
2. Mass entry of mothers into the paid workforce, without a corresponding build-out of childcare
3. Institutional distrust as formative default — Watergate, stagflation, the Challenger disaster, the early AIDS crisis
4. Latchkey childhood and unsupervised time as the norm rather than the exception
5. Cable television and the first personal computers; the beginning of mediated childhood

Parenting trend they received: **This is the strongest single data point in this entire theme.** Ramey & Ramey's analysis of twelve US time-use surveys from 1965 to 2007 found that parental time spent on childcare declined for three decades and then began rising sharply in the mid-1990s. This data strongly supports the publication's commentary regarding this cohort.

The trough is Gen X's childhood. The subsequent rise is Millennial and Gen Z childhood. The "latchkey generation" is not a cultural stereotype — it is a measurable minimum in the time-diary record, bracketed by higher parental investment on both sides.

Ramey, G., & Ramey, V. A. (2010). The rug rat race. *Brookings Papers on Economic Activity*, Spring 2010, 129–199. After the mid-1990s turn, less-educated mothers increased childcare time by over four hours per week and college-educated mothers by over nine. The authors attribute the rise to intensified competition for college admission, supported by a comparison with Canada, where admissions competition was more stable and parental time did not rise.

Socioeconomic shifts: Deindustrialisation, the erosion of the implicit lifetime-employment contract, the shift from defined-benefit pensions to individual responsibility. The first cohort widely told they would do worse than their parents.

Emotional expressivity and regulation: There is no direct measurement of Gen X emotional expressivity in childhood. What exists is structural: the time-diary trough, the divorce peak, and the maternal-employment curve. Putnam, R. (2000). *Bowling Alone* documents declining social capital and associational life across this period, which supports the "managed alone" reading at the level of community structure.

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The honest characterisation: privatised regulation. The evidence supports reduced adult supervision and reduced institutional containment; it does not directly measure what that did to emotional expressivity. The verbiage in the publication is mostly observation of this cohort, as well as inference from surrounding issues documented above.

MILLENNIALS (born 1981–1996)

Formative forces

1. September 11 and the security state as adolescent backdrop
2. The 2008 financial crisis striking at labour-market entry — a documented cohort scarring effect
3. The arrival of the consumer internet and then social media during adolescence and early adulthood
4. The mainstreaming of therapy and the collapse of mental health stigma (see Part 3)
5. Student debt and delayed adulthood markers — later marriage, later homeownership, later childbearing

Parenting trend they received: The intensification. Three overlapping literatures:

- **Concerted cultivation.** Lareau, A. (2003). *Unequal childhoods: Class, race, and family life*. Middle-class parents actively cultivating children's talents through organised activities and reasoned negotiation, versus working-class "accomplishment of natural growth." The negotiation style is important to note in the context of this publication: these children were trained to articulate and argue their position with adults.
- **Intensive mothering.** Hays, S. (1996). *The cultural contradictions of motherhood*. The emergence of child-rearing as expert-guided, emotionally absorbing, labour-intensive work.
- **Economic explanation.** Doepke, M., & Zilibotti, F. (2019). *Love, money, and parenting: How economics explains the way we raise our kids*. Princeton University Press. Using Baumrind's authoritarian/permissive/authoritative typology and World Values Survey data, they show that rising economic inequality drives parenting toward more intensive styles. Their summary line is directly useful in the context of supporting evidence for the publication: economics transformed the hands-off parenting of the 1960s and 1970s into a frantic, overscheduled activity, and produced a widening parenting gap between richer and poorer families.

Note: *the self-esteem movement is widely blamed for this cohort's supposed fragility. The underlying research does not support the movement's premises — Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? Psychological Science in the Public Interest, 4(1), 1–44 found that high self-esteem does not cause the outcomes claimed for it. That is hence a legitimate citation for "the intervention was built on a weak premise." It is not evidence that Millennials are fragile, and in no way does this publication make that inference.*

Emotional expressivity and regulation: Stigma decline, treatment-seeking increases and the SEL[2] build-out, all document a genuine expansion of permission and vocabulary. No comparable evidence documents a corresponding change in regulatory capability — largely because nobody has measured it that way.

The honest characterisation: permission is measurable; capability is not measured. There is a gap in evidence to support it, but that does not preclude the observational nature of some inferences related to this cohort.

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[2] ***Social and Emotional Learning*** *— the umbrella term for school curricula that explicitly teach self-awareness, emotion recognition, self-management, relationship skills and responsible decision-making, rather than leaving those to be picked up incidentally. The dominant framework comes from CASEL (the Collaborative for Academic, Social, and Emotional Learning), a US organisation that defines the five competency areas most programmes are built around.*

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GENERATION Z (born 1997–2012)

Formative forces

1. Smartphones and social media from early adolescence — the first cohort for whom this is true
2. Growing up inside the post-2008 economy and, later, COVID-era schooling disruption
3. Active-shooter drills and climate anxiety as routine features of schooling
4. Emotional literacy taught as curriculum (see Part 3)
5. Political polarisation as ambient condition rather than periodic event

Parenting trend they received: Continuation and intensification of the concerted-cultivation model, plus documented increases in supervision and decreases in unsupervised childhood play and independent mobility. The parental-time curve from Ramey & Ramey continues upward.

Socioeconomic shifts: Gig and platform work; housing unaffordability; the decoupling of educational attainment from economic security.

Emotional expressivity and regulation: There is strong supportive evidence for the expressivity of this cohort, however the causes of distress are fiercely contested, with no consensus yet reached.

Some sources of contention include:

- **Haidt, J. (2024). *The Anxious Generation*** argues that a phone-based childhood beginning around 2010–2015 caused a youth mental health crisis.
- **Odgers, C. L. (2024). Review of *The Anxious Generation*. *Nature*, 628.** argues the book's central claim is not supported by the science, warns of "rising hysteria," and cautions that blaming social media may distract from the real causes.
- **Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3, 173–182.** Specification curve analysis across roughly 355,000 participants finding that digital technology use explains at most around 0.4% of variance in well-being.

The publication references only that this cohort has more emotional vocabulary, more permission, and more institutional support for expression than any before it, and that distress measures rose. The publication addresses the critical necessity of regulation and structure to this cohort. Whether phones and/or social media caused the distress is immaterial to the focus of the publication.

GENERATION ALPHA (born approx. 2013–2024)

Status: The oldest are around thirteen. These are the future workforces and anything mentioned about them in the publication is pure speculation based on observation.

What is known:

- They are the first cohort for whom universal school-based SEL is the norm from the earliest years (Cipriano et al., 2023)
- Their parents are predominantly Millennials, raised under the permission-expansion described above
- They are growing up amid substantially increased identification of neurodevelopmental difference
- COVID-era disruption hit their early schooling and early socialisation
- Generative AI arrives during their childhood — genuinely novel, genuinely unmeasured

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If the pattern described in this publication holds, the challenge for this cohort will be governance rather than identification. To comment categorically regarding any other aspects of their future emotional regulation and expression would not be defensible and has been omitted.

PART 3 — Measurable Data on Changing Trends of Emotional Expressivity across Generations

Series	Source	Direction
Self-expression / post-materialist values by birth cohort	Inglehart (1971–2008), World Values Survey	Rises monotonically across cohorts
Emotion-laden vs. fact-related language, 1850–2019	Scheffer et al. (2021), *PNAS*	Reverses in the 1980s, accelerates ~2007
Public stigma of mental illness, 1996 / 2006 / 2018	Pescosolido et al. (2021), *JAMA Netw Open*	Rejection declines; largely a cohort effect
Parental childcare time, 1965–2007	Ramey & Ramey (2010), *BPEA*	Declines three decades, rises sharply from mid-1990s
Adults receiving mental health treatment, 2019–2023	CDC/NCHS MMWR (2024)	19.2% → 23.9%, concentrated under 65

Combined, these four decades of data support the claim outlined in the publication, with reasonable confidence, that cultural permission for emotional expression expanded, and the institutional infrastructure supporting it expanded with it.

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Research Paper 2 — Neuroscience Foundations

The coaching and L&D world describes this chain in triune-brain language: an old "limbic" or "emotional" brain that generates reactivity, and a newer "executive" or "rational" brain that regulates it. While this model feels intuitive, and is mostly how it's taught, it is no longer scientifically accurate or relevant.

Cesario, J., Johnson, D. J., & Eisthen, H. L. (2020). Your brain is not an onion with a tiny reptile inside. *Current Directions in Psychological Science*, 29(3), 255–260. doi:10.1177/0963721420917687

The authors state that the belief that newer brain structures were layered over older ones, endowing animals with more complex functions, is widely shared in introductory psychology textbooks but *has long been discredited among neurobiologists*, and stands in contrast to what they describe as clear and unanimous agreement among researchers studying nervous-system evolution. They explicitly urge psychologists to abandon the view. This is not a fringe correction. It is a mainstream journal of the Association for Psychological Science telling an entire discipline to stop.

Even avoiding the evolutionary-layers language, a related claim will still not hold: *the amygdala produces the feeling of fear or anger.* Joseph LeDoux — whose own research built the amygdala's reputation — has spent the last decade correcting this. His two-system framework distinguishes **defensive survival circuits** (subcortical, fast, not conscious) from the **conscious experience of fear** (cortically constructed, dependent on higher-order representation). The circuits and the feelings are different things with different substrates. (LeDoux & Pine, 2016)

Hence the term, "amygdala hijack" is not defensible. Instead, explaining reactive interactions as "A fast, cue-driven threat-response system engaged before conscious appraisal caught up" is.

This body of work replaces the anatomical-hierarchy framing with a **functional dual-process framing**. We lose nothing pedagogically and gain everything defensively.

Don't say	Say
The limbic brain / emotional brain	Fast, cue-driven, automatic processing
The executive brain / rational brain	Slower, controlled, deliberate processing
The older brain overrides the newer brain	The automatic response completes before controlled processing engages
The amygdala hijacks us	The response is initiated before appraisal has finished
Reason lives in the cortex, emotion lives below it	Emotion and cognition are distributed and interacting, not layered
We're wired for survival by our reptilian brain	Threat-relevant learning is fast, durable and hard to overwrite

The functional claim — *some emotional responding is fast, cue-triggered and completes before deliberate thought engages* — is uncontroversial and thoroughly evidenced. It is only the anatomical story about which parts of the brain do it, and in what evolutionary order, that is wrong.

One useful consequence: this reframe strengthens the publication's argument. If reactivity is an automatic *process* rather than a primitive *place*, then it can be retrained — which is exactly what the P.A.C.E. framework claims. The triune model implies you are fighting an ancient structure you cannot change, which creates resistance to change and new learning.

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PART 1 — The Chain, Link by Link

The model: **event → narrative → protective/faulty belief → behaviour**, with pressure as the trigger rather than the cause. Each link has real support.

Link 1: Events create durable, emotionally-weighted memory traces

Nader, K., Schafe, G. E., & LeDoux, J. E. (2000). Fear memories require protein synthesis in the amygdala for reconsolidation after retrieval. *Nature*, 406(6797), 722–726.

The foundational finding: consolidated emotional memories, when retrieved, re-enter a labile state and require protein synthesis to be re-stored. This overturned the assumption that consolidated memory is fixed.

Why it matters to the publication: this is the neurobiological warrant for the entire premise that old patterns can be changed rather than merely managed. It is also the warrant for *why they persist* — the trace is durable by design.

Link 2: Memory is reconstructive, and narrative is part of the structure

Schacter, D. L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychologist*, 54(3), 182–203. Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge University Press.

Memory is not playback. It is reconstruction, shaped by existing schemas, and systematically distorted in predictable ways. This substantiates the publication's statement that the protective belief is "a conclusion drawn by someone too young, too hurt, or too overwhelmed to draw an accurate one" — and that the belief, in the moment, can feel entirely true while being materially wrong.

Link 3: The keystone — memories, meanings and emotional responses form one integrated system

Lane, R. D., Ryan, L., Nadel, L., & Greenberg, L. (2015). Memory reconsolidation, emotional arousal, and the process of change in psychotherapy: New insights from brain science. *Behavioral and Brain Sciences*, 38, e1. doi:10.1017/S0140525X14000041. https://pubmed.ncbi.nlm.nih.gov/24827452/

Lane and colleagues propose an **integrated memory model with three interactive components: autobiographical (event) memories, semantic structures, and emotional responses.** They argue that therapeutic change across behavioural, cognitive-behavioural, emotion-focused and psychodynamic modalities results from updating prior emotional memories through reconsolidation incorporating new emotional experiences.

Their three essential ingredients of change:

1. Reactivating old memories
2. Engaging in new emotional experiences that are incorporated into those reactivated memories via reconsolidation
3. Reinforcing the integrated structure by practising a new way of behaving and experiencing across contexts

When compared to the chain outlined in the publication: **event memory → leads to narrative (semantic structure) → which creates an emotional/behavioural response**, changed by pause, examination, and repeated practice. The publication independently arrived at a model that a peer-reviewed synthesis in *Behavioral and Brain Sciences* proposed in 2015. That is the strongest possible position for this body of work: *the P.A.C.E. framework was built in practice and converges with an independently developed neurobiological model.*

Link 4: Cued responses run automatically, faster than deliberate appraisal

This is the "old wire fires before you decide" claim. The evidence is the dual-process and automaticity literature broadly, plus the specific finding that reactivity is reduced when controlled processing is recruited (Link 5). The Gollwitzer implementation-intention research in Part 2 rests on exactly this premise: cue-triggered behaviour is the

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default, and the way to change it is to install a competing cue-response link rather than rely on in-the-moment willpower.

Link 5: Interrupting the chain has a demonstrated neural mechanism — and it operates on the narrative

Buhle, J. T., Silvers, J. A., Wager, T. D., Lopez, R., Onyemekwu, C., Kober, H., Weber, J., & Ochsner, K. N. (2014). Cognitive reappraisal of emotion: A meta-analysis of human neuroimaging studies. *Cerebral Cortex*, 24(11), 2981–2990. doi:10.1093/cercor/bht154

Meta-analysis of 48 neuroimaging studies. Reappraisal consistently activated cognitive control regions and lateral temporal cortex and modulated the bilateral amygdala and no other regions. The authors' conclusion: **reappraisal works by using cognitive control to modulate the *semantic representation* of an emotional stimulus, and the altered representation then attenuates amygdala activity.**

This is key: *Changing the meaning changes the emotional response — and the meaning is the lever, not the emotion.*

This is the core thesis with a meta-analytic neuroimaging basis under it. The mechanism is not "use your executive brain to suppress your limbic brain." It is "alter the story, and the reactivity follows." This is a substantially more precise and defensible claim. It also maps directly to Challenge, in the P.A.C.E. framework.

PART 2 — P.A.C.E. Mapped to Mechanism

Each step, its research correlate, and the honest strength of the link.

PAUSE — *Strong evidence*

Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology*, 38, 69–119.

Meta-analysis of 94 independent tests. Pooled effect size d = 0.65 — medium-to-large — for if-then plans over goal intentions alone. The mechanism is that specifying a situational cue and linking it to a pre-decided response makes the goal-relevant behaviour available automatically when the cue appears, rather than requiring deliberation under load.

This is the strongest single piece of evidence for the Pause step, and it changes how Pause should be taught. A pause you intend to take is a goal intention. A pause you have pre-specified — *when I feel my chest tighten in a meeting, then I put my pen down and count one breath before speaking* — is an implementation intention, and it carries a significant advantage. The essence of applying P.A.C.E. is that Pause is an “if-then” form of conscious self-management.

Ayduk, Ö., & Kross, E. (2010). From a distance: Implications of spontaneous self-distancing for adaptive self-reflection. *Journal of Personality and Social Psychology*, 98(5), 809–829. Kross, E., & Ayduk, Ö. (2011). Making meaning out of negative experiences by self-distancing. *Current Directions in Psychological Science*, 20(3), 187–191.

Analysing a negative experience from a self-distanced perspective, rather than a self-immersed one, produces less emotional and physiological reactivity in the short term and buffers against rumination over time. The effect is mediated by what people think about, not merely by delay.

Important resultant refinement of the P.A.C.E. model: the Gap is not empty waiting. Pausing without distancing produces rumination, which is worse than acting. The Pause step must specify *a change in perspective*, not just a change in tempo. This has been explicitly emphasised in the publication.

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AFFIRM — *Strong evidence*

Lieberman, M. D., Eisenberger, N. I., Crockett, M. J., Tom, S. M., Pfeifer, J. H., & Way, B. M. (2007). Putting feelings into words: Affect labeling disrupts amygdala activity in response to affective stimuli. *Psychological Science*, 18(5), 421–428. Torre, J. B., & Lieberman, M. D. (2018). Putting feelings into words: Affect labeling as implicit emotion regulation. *Emotion Review*, 10(2), 116–124.
doi:10.1177/1754073917742706

Labelling an emotional state diminishes amygdala and limbic response, with right ventrolateral prefrontal activity inversely correlated with amygdala activity. Torre and Lieberman establish affect labelling as a form of implicit emotion regulation with effects comparable to reappraisal across experiential, autonomic, neural and behavioural domains — notably without feeling effortful.

Affirm is affect labelling. It is not a courtesy before the real work; it is a regulatory intervention that creates the conditions under which Challenge can succeed. It should be noted that this publication encourages duality of application – internal and external. Affirming one's own emotion and affirming another's expressed emotion are both versions of affect labelling that serve emotional regulation.

CHALLENGE — *Strong evidence*

Buhle et al. (2014), above. Reappraisal is among the most heavily studied regulation strategies in the literature, and the meta-analytic mechanism — controlled modulation of semantic representation, which then attenuates amygdala response — is precisely what Challenge does.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271–299. Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1–26.

Gross's process model distinguishes **antecedent-focused** regulation (acting before the response is fully generated — situation selection, attentional deployment, cognitive change) from **response-focused** regulation (acting on the response after it has formed — chiefly suppression). Antecedent-focused strategies, especially reappraisal, produce better affective, cognitive and social outcomes; suppression produces worse.

This research vocabulary serves the publication's central distinction. The Silent-Generation pole is response-focused suppression. The current-culture pole is expression without antecedent regulation. P.A.C.E. is an antecedent-focused sequence. That is not just a metaphor — it is the actual taxonomy the field uses and is an accurate and specific way to state the central thesis.

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ENCOURAGE — *Weakest link.*

There is no direct research literature on "encouragement as the fourth step of an emotion-regulation sequence." Encourage is theoretically grounded and practically derived from human behavioural observation. It is not evidence-backed to the same standard as the first three.

The nearest supports are:

- **Lane et al. (2015)** — reconsolidation requires a *new emotional experience* to be incorporated into the reactivated memory. Encourage is plausibly where that new experience is supplied: the relationship holds, the challenge did not cost belonging. This is a reasonable theoretical fit and should be stated as such.
- **Self-compassion research** (Neff; MacBeth & Gumley's meta-analysis of self-compassion and psychopathology) — supports the internal direction of Encourage and supports the line about self-evaluation without shame.
- **Psychological safety** (Edmondson) — supports the interactive direction in team settings and is already a language the corporate audience accepts.

PART 3 — Claims not supported in the publication

Topics and themes that circulate widely but will not survive scrutiny of the data.

Claim	Problem
Reptilian / limbic / rational triune brain	Formally repudiated (Cesario et al., 2020)
Amygdala hijack	Popularisation, not a research construct; contradicted by LeDoux's own two-system correction (LeDoux & Pine, 2016)
The amygdala generates the feeling of fear	Conflates defensive survival circuits with conscious experience
Emotions last 90 seconds unless you feed them	No empirical basis; traces to a single popular book, not to data
We use 95% of our brain unconsciously	No source; a number of unknown origins repeated as fact
Left brain / right brain personality types	Long discredited
It takes 21 (or 66) days to form a habit	21 is anecdotal; 66 is a median from one small study with an enormous range, routinely misquoted as a rule
Neuroplasticity means you can rewire anything	True as a general principle, meaningless as a warrant; specify the mechanism instead

Important: This body of work does not rely on Schiller et al. (2010). Although it is the most-cited human demonstration of therapeutic reconsolidation and is widely quoted in coaching material, it carries a 2018 addendum correcting misreported participant exclusions, and a published verification report (Chalkia et al., 2020) concluded that its results are unreliable. Reconsolidation as a phenomenon is instead supported by Nader et al. (2000), and the clinical model by Lane et al. (2015).

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PART 4 — Evidence Grading

The following table grades each neuroscientific claim by the strength of its evidence.

Claim	Grade	Basis
Memory, meaning and emotional response function as one integrated system	Strong	Lane et al., 2015
Consolidated emotional memories can be destabilised and updated	Strong	Nader et al., 2000
Memory is reconstructive, not a recording	Strong	Schacter, 1999; Bartlett, 1932
Changing the semantic representation attenuates the emotional response	Strong	Buhle et al., 2014
Labelling an emotion is itself regulatory	Strong	Lieberman et al., 2007; Torre & Lieberman, 2018
Pre-specified if-then plans outperform intention alone	Strong	Gollwitzer & Sheeran, 2006 (d = 0.65)
Distanced reflection beats immersed reflection	Strong	Ayduk & Kross, 2010
Antecedent-focused regulation outperforms suppression	Strong	Gross, 1998, 2015
Encourage closes the loop and stabilises the change	Theoretical	Consistent with Lane et al.; not directly tested
Reconsolidation-based change transfers to non-clinical workplace settings	Plausible, unestablished	Clinical translation is contested

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Full List of References

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Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299.

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LeDoux, J. E., & Pine, D. S. (2016). Using neuroscience to help understand fear and anxiety: A two-system framework. *American Journal of Psychiatry, 173*(11), 1083–1093.

Lieberman, M. D., Eisenberger, N. I., Crockett, M. J., Tom, S. M., Pfeifer, J. H., & Way, B. M. (2007). Putting feelings into words: Affect labeling disrupts amygdala activity in response to affective stimuli. *Psychological Science, 18*(5), 421–428.

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Research Paper 3: Emotional Regulation

– Awareness, Expression, Regulation, Mature Response

The scholarly basis below treats these constructs as genuinely distinct capabilities rather than points on a single scale. The central finding across all sources noted, and the one on which the publication rests, is that these are separable capabilities with separate evidence bases. Competence at one does not imply competence at the next. The culture treats them as a single spectrum — more awareness, more expression, therefore more maturity. The research does not support that, and in one case supports the opposite. This document provides more detail and context on all findings.

PART 1 — AWARENESS

Reference*: Lane, R. D., & Schwartz, G. E. (1987). Levels of emotional awareness: A cognitive-developmental theory and its application to psychopathology. American Journal of Psychiatry, 144(2), 133–143.*

Lane and Schwartz proposed that emotional awareness is a form of cognitive processing that undergoes five levels of structural transformation, in a developmental sequence derived from Piaget and Werner. The five levels:

1. Awareness of **bodily sensations**
2. Awareness of the **body in action** (action tendencies)
3. Awareness of **individual feelings**
4. Awareness of **blends of feelings**
5. Awareness of **blends of blends of feelings** — one's own and another person's simultaneously

This is a validated developmental hierarchy of emotional maturation, published in the *American Journal of Psychiatry*, and it has an instrument attached — the Levels of Emotional Awareness Scale (Lane, Quinlan, Schwartz, Walker & Zeitlin, 1990, *Journal of Personality Assessment*, 55, 124–134), a performance measure rather than a self-report, scored on the differentiation and integration of emotion words in written responses to twenty scenarios.

Three aspects make this source supportive of the publication.

1. It is a **maturation model**, which is what the publication claims exists. The publication hence references and participates with an existing developmental frame.
2. It is a **performance measure**, not a self-report. This is relevant as the publication speaks to the issue of people talking *about* emotion fluently. The LEAS measures the structure of what they actually produce.
3. **Richard Lane is the same author** as the integrated memory model in Research Paper 2. There is a coherent body of work running from emotional awareness through memory structure to psychotherapeutic change, by one research group, spanning nearly forty years. That is a strong supportive thread for the publication.

The model's own framing is that emotional awareness is described as **learned**, depending on attending to emotion, reflecting on its meaning, and possessing the repertoire of emotion concepts needed for fine-grained understanding. Learned, therefore teachable — which is the premise spoken to in the publication.

Granularity: awareness has resolution, not just presence

Emotional granularity (or differentiation) — the capacity to distinguish between closely related emotional states rather than experiencing undifferentiated "bad" — is associated with more effective regulation. Barrett, Gross, Christensen & Benvenuto (2001), "Knowing what you're feeling and knowing what to do about it", *Cognition*

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and Emotion, 15(6), 713–724 is the foundational reference; the affect-labelling work covered in the neuroscience document supplies the mechanism.

The culture has expanded emotional *vocabulary* without necessarily expanding *granularity*. Those are not the same. A person can hold a large stock of emotion terms — trigger, boundary, trauma response, dysregulation — and still apply them at low resolution, as category labels for undifferentiated distress. That distinction is sharper than "more words but no wisdom," and it is defensible.

Alexithymia: the floor of the scale

The Lane & Schwartz model was built partly to account for alexithymia — difficulty identifying and describing feelings, measured by the Toronto Alexithymia Scale (TAS-20; Bagby, Parker & Taylor, 1994). When considering the commentary related to the Silent Generation the cultural condition resembles, at population level, what alexithymia looks like at individual level.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? The four-branch ability model: perceiving emotion, using emotion to facilitate thought, understanding emotion, and managing emotion. It is explicitly hierarchical — perception at the base, management at the top.

This is a respected academic version of "emotional intelligence" (as distinct from the mixed popular models), it is measured by an ability test rather than self-report, and it affirms what is claimed in the publication: perceiving is branch one of four. Nobody in the field has ever claimed perception was the destination. The culture did that on its own.

PART 2 — EXPRESSION

This section carries the most counter-intuitive evidence in the theme, and it is the strongest supportive material for the publication's central argument.

Catharsis does not work

Bushman, B. J. (2002). Does venting anger feed or extinguish the flame? Catharsis, rumination, distraction, anger, and aggressive responding. Personality and Social Psychology Bulletin, 28(6), 724–731.

Angered participants hit a punching bag while either thinking about the person who angered them (rumination) or thinking about getting fit (distraction), against a no-punching-bag control. The rumination group felt angrier than the distraction or control groups and behaved most aggressively afterwards. Distraction was next. The control group — people who did nothing at all — showed the least anger and aggression.

Bushman's own summary: rumination increased rather than decreased anger and aggression, and doing nothing was more effective than venting. The results directly contradict catharsis theory.

See also *Bushman, B. J., Baumeister, R. F., & Stack, A. D. (1999). Catharsis, aggression, and persuasive influence: Self-fulfilling or self-defeating prophecies? Journal of Personality and Social Psychology, 76(3), 367–376.*

The cultural intuition that expression discharges emotion — get it out, let it go, better out than in — is not merely unsupported. It is contradicted under experimental conditions. This strongly supports the position expressed in the publication, in that “venting” is not helpful. It is delivered by mainstream social psychology.

Co-rumination: the finding that supports the publication

Rose, A. J. (2002). Co-rumination in the friendships of girls and boys. *Child Development*, 73(6), 1830–1843.

Co-rumination is extensively discussing and revisiting problems, speculating about them, and focusing on negative feelings — with a supportive other. Rose surveyed 608 third-, fifth-, seventh- and ninth-graders and

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found co-rumination related **simultaneously to high-quality close friendships and to depression and anxiety symptoms.** Girls co-ruminated more, which helped account for both their better friendship adjustment and their greater internalising problems.

Rose, A. J., Carlson, W., & Waller, E. M. (2007). Prospective associations of co-rumination with friendship and emotional adjustment. *Developmental Psychology*, 43(4), 1019–1031. A six-month longitudinal follow-up established direction: for girls, co-rumination *predicted increases* in depressive and anxiety symptoms over time, alongside increases in friendship quality.

The authors' own implication is an important supportive point: some girls at risk of developing internalising problems may go undetected **because they have seemingly supportive friendships.** This is not aggressive venting. It is the kind of sharing most people would regard as healthy, which is what makes the finding so significant. Sharing feelings, at length, with someone who cares, genuinely produces closeness. It also predicts increasing depression and anxiety. Expression is doing real relational work and real emotional damage at the same time, and the relational benefit is what conceals the damage.

That is a strong empirical support of "more disclosure, less regulation," and it is strong evidence for the need to build healthy emotional structures.

In the expressive-writing literature (Frattaroli, 2006) the benefit is associated with *meaning-making* — changes in causal and insight language across sessions — rather than with emotional discharge. (Pennebaker (1997), *Psychological Science, 8*(3), 162–166.) The honest formulation is that *expression that constructs meaning helps; expression that recirculates feeling does not, and in company it can actively harm.*

PART 3 — REGULATION

The taxonomy

Gross, J. J. (1998; 2015). The process model: **antecedent-focused** strategies act before the emotional response is fully generated (situation selection, situation modification, attentional deployment, cognitive change); **response-focused** strategies act after (chiefly expressive suppression). These concepts are covered in the neuroscience document, and the publication upholds this thinking and research.

What actually works — the two meta-analyses:

1. **Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: A meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological Bulletin*, 138(4), 775–808.**

   306 experimental comparisons. The headline finding: **cognitive change was significantly more effective than attentional deployment or response modulation across emotional outcomes.** Response modulation outperformed attentional deployment.

   The important point is that *changing the meaning* outperforms *changing where you look* and *changing what you show*. This directly relates to “Challenge” in the P.A.C.E. model.

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2. **Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30(2), 217–237.**

241 effect sizes from 114 studies across anxiety, depression, eating and substance-related disorders. Six strategies examined. Maladaptive strategies — **rumination, avoidance, suppression** — associated with more psychopathology; adaptive strategies — **acceptance, reappraisal, problem solving** — with less. The largest effect size was for **rumination**.

These two studies provide strong evidence in support of the two-poles argument. Suppression exists on the maladaptive side. So does rumination. The Silent Generation's pole and the current culture's pole are *both* in the maladaptive column of the same meta-analysis, and the adaptive column contains neither. This is a direct empirical statement in support of the "pendulum."

PART 4 — MATURE RESPONSE

The fallacy of uniform efficacy

Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. Perspectives on Psychological Science, 8(6), 591–612.

Bonanno and Burton name and attack what they call the **fallacy of uniform efficacy** — the assumption that particular regulatory strategies are consistently beneficial or consistently maladaptive. They propose instead **regulatory flexibility**, with three sequential components:

1. **Context sensitivity** — reading what this situation actually demands
2. **Repertoire** — having access to a genuine range of strategies
3. **Feedback responsiveness** — monitoring whether the chosen strategy is working, and switching when it isn't

This directly supports the concept of mature responsiveness in the publication. Maturity is not possession of the right strategy. It is context-sensitive deployment of a range, with correction in flight. Three components, each independently researched.

See also **Bonanno, G. A., Papa, A., Lalande, K., Westphal, M., & Coifman, K. (2004). The importance of being flexible: The ability to both enhance and suppress emotional expression predicts long-term adjustment. *Psychological Science*, 15(7), 482–487.** The title alone makes the point: the capacity to do *both*, as the situation requires, predicts adjustment. Neither pole does.

Maturity as a developmental trajectory

Vaillant, G. E. (1977). *Adaptation to life*; and Vaillant, G. E. (1992). *Ego mechanisms of defense*.

Working from the Harvard Grant Study and other decades-long longitudinal cohorts, Vaillant organised defensive functioning into a hierarchy from pathological through immature and neurotic to **mature** (sublimation, suppression, anticipation, altruism, humour). His longitudinal finding: mature defences are associated with greater success in work and relationships and lower psychopathology, and defensive style tends to mature over the life course.

Vaillant's data also links defence maturity to *physical* outcomes — reliance on immature defences in early adulthood predicted increasing chronic health problems from age 30 to 60 in one cohort.

This research provides longitudinal evidence that emotional maturation is a real trajectory with real consequences, not a metaphor. It also provides a vocabulary of *maturity* that predates and outranks the current cultural conversation.

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The top branch

Mayer & Salovey's fourth branch — *managing emotion in oneself and others* — sits above perceiving, using, and understanding. The model has always been a ladder. The publication's argument is that the culture stopped on the first rung and renamed it the top.

PART 5 — Clarification of Terminology

The word **suppression** carries two incompatible technical meanings in the literature cited here.

	Gross's *expressive suppression*	**Vaillant's *suppression***
What it is	Inhibiting the outward display of an emotion already underway	Consciously and deliberately postponing attention to an impulse or conflict, intending to return to it
Conscious?	Yes, but response-focused and effortful	Yes, deliberate, with intent to revisit
Where it sits	**Maladaptive** — Aldao et al. (2010); poorer affective, cognitive and social outcomes	**Mature defence** — the top tier of Vaillant's hierarchy

These are genuinely different constructs using the same word. Gross's version is *hiding the feeling*. Vaillant's is *shelving it on purpose, with a plan to come back*.

The publication addresses suppression from two distinct positions: **conscious and deferred** versus **automatic and denied**. Repression is unconscious and is not on the mature tier. Expressive suppression is display-management with the internal state untouched. Vaillant's suppression is a deliberate hold with intent to process.

The Silent Generation's problem was never "holding it in" as such — it was that the holding was automatic, unchosen, and never followed by processing.

PART 6 — The load-bearing claim, stated defensibly

Emotional awareness, emotional expression, emotional regulation and mature response are four separable capabilities. The research literature treats them separately, measures them separately, and finds that competence in one does not confer competence in the next.

Awareness has a validated developmental hierarchy of its own — five levels, with a performance measure attached. Expression has been studied for fifty years and the findings are not what the culture assumes: venting does not discharge anger, and sharing distress at length with a supportive friend, particularly among girls, predicts increasing depression even as it deepens the friendship. Regulation has a taxonomy and two large meta-analyses, which place suppression *and* rumination on the same maladaptive side of the ledger. And mature response, the fourth capability, turns out not to be a strategy at all but a flexibility — reading the context, holding a repertoire, and correcting when the chosen approach isn't working.

Our culture collapsed four capabilities into one axis and assumed that movement along it was progress.

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P.A.C.E. mapped to the four stages

Stage	P.A.C.E. step	Evidential basis
Awareness	**Affirm**	Affect labelling; emotional granularity; LEAS levels 3–5
Expression	*(deliberately not a step)*	The gap in P.A.C.E. is the point — see below
Regulation	**Pause** and **Challenge**	Implementation intentions; self-distancing; cognitive change as the top-performing strategy class
Mature response	The **sequence**, plus **Encourage**	Regulatory flexibility: context sensitivity, repertoire, feedback responsiveness

Worth noticing: P.A.C.E. has no expression step. That is the key feature, as this publication's claim is that emotional expression is what the culture already does well. The missing piece, the entire premise of the publication, is the processing structures. P.A.C.E. is the framework for that structure.

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Research Paper 4: Reflective vs. Automatic Processing

Automatic and reflective processing, the evidence behind mature emotional response, and an audit of where common EQ teaching has drifted from the science.

Companion to Research Paper 2 — Neuroscience Foundations. That document established the mechanism (memory → meaning → response, and reappraisal as the lever). This paper addresses the architecture of internal processing, and what the self-regulation and emotional intelligence literatures support.

Introduction:

Three findings reshape the React/Respond framework, and all three strengthen it.

1. **Automatic is not the enemy.** The regulation literature holds that implicit, automatic regulation is as necessary for wellbeing as the deliberate kind. The instinct that "older wiring" is not inherently bad is correct and citable.
2. **People with the best self-control are not the best at resisting.** They resist *less*, because good responses have become habitual. Mature response is not a lifetime of effortful override. It is deliberate practice that retrains what fires automatically.
3. **Much of the EQ field teaches self-awareness and willpower in ways the research does not support.** Reflection is not the same as insight, the least emotionally skilled are the least aware of it, and the "willpower as depletable fuel" model failed a 23-lab replication.

The reframe that follows from all three:

The goal is not to live in the gap. It is to train what reacts before you get there.

PART 1 — The Dual-Process Frame: What Holds and What Doesn't

React vs. Respond is a dual-process model. Dual-process theory is itself contested.

The defence. Evans, J. St. B. T., & Stanovich, K. E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science*, 8(3), 223–241. The standard modern statement: two types of processing, one autonomous and not dependent on working memory, one that engages working memory and supports hypothetical reasoning.

The critique. Melnikoff, D. E., & Bargh, J. A. (2018). The mythical number two. *Trends in Cognitive Sciences*, 22(4), 280–293. Their target is the *typology* — the assumption that processes sort into two tidy packages, one unintentional, uncontrollable, unconscious and efficient, the other the reverse. They argue the framework lacks empirical support, contradicts established findings, and that the dual-process typology is a convenient and seductive myth.

The reply. Pennycook, G., De Neys, W., Evans, J. St. B. T., Stanovich, K. E., & Thompson, V. A. (2018). The mythical dual-process typology. *Trends in Cognitive Sciences*, 22(8), 667–668. The leading dual-process theorists responded that serious dual-process theory never claimed the features all line up.

What survives the argument, and what it means for this publication: both sides agree the features *dissociate*. A process can be automatic yet goal-directed. A process can be fast yet controlled. Unconscious processing can be intelligent.

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The teaching trap is:

React	Respond
automatic	deliberate
unconscious	conscious
fast	slow
primitive	evolved
bad	good

The first three rows are defensible as tendencies. The last two are not. They are the triune-brain error reappearing in process language.

Reframed in the publication: React is *whatever has been practised, firing on cue.* Respond is *deliberate processing, recruited when the practised response doesn't fit.* Neither is good or bad in itself. What matters is what React was trained on, and whether Respond is available when it's needed.

PART 2 — Automatic Is Not the Enemy

This is the evidence for the "older wiring isn't always bad" claim.

Gyurak, A., Gross, J. J., & Etkin, A. (2011). Explicit and implicit emotion regulation: A dual-process framework. *Cognition and Emotion*, 25(3), 400–412.

The authors note that most research had focused on explicit, effortful regulation, and propose a dual-process framework integrating explicit and implicit forms — arguing that **both forms of regulation are necessary for well-being.**

That is James Gross, the architect of the process model, co-authoring the claim that automatic regulation is not a lesser form. Implicit regulation — regulating without deliberate intent — is a normal and necessary part of healthy emotional life.

Braunstein, L. M., Gross, J. J., & Ochsner, K. N. (2017). Explicit and implicit emotion regulation: A multi-level framework. *Social Cognitive and Affective Neuroscience*, 12(10), 1545–1557.

Refines this into two independent dimensions — whether the regulatory *goal* is explicit or implicit, and whether the *process* runs in a controlled or automatic fashion — producing four classes of regulation rather than two. Useful if the white paper needs a more sophisticated model than a binary; the practical point is that "automatic" and "unregulated" are not synonyms.

Connection to the generational material: Elder's longitudinal work found many Depression-era children fared unusually well in adulthood. Some of what that cohort carried — resourcefulness, steadiness under hardship, not dwelling — was implicit regulation doing its job. The failure was not that their regulation was automatic. It was that the automatic patterns were narrow, some were costly, and there was no deliberate route available when they didn't fit.

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PART 3 — The Reframe: Respond Is How You Rewrite React

Galla, B. M., & Duckworth, A. L. (2015). More than resisting temptation: Beneficial habits mediate the relationship between self-control and positive life outcomes. *Journal of Personality and Social Psychology*, 109(3), 508–525.

Six studies, total N = 2,274. The authors start from a puzzle: conventional wisdom holds that self-control is used to effortfully inhibit maladaptive impulses, yet emerging evidence shows self-control is associated with *less* inhibition in daily life. Their finding: people with better self-control use less effortful inhibition but make better progress on their goals because they **rely on beneficial habits.** Habits mediated the effect of self-control on increased automaticity and lower effortful inhibition.

They build on **Hofmann, W., Baumeister, R. F., Förster, G., & Vohs, K. D. (2012). Everyday temptations: An experience sampling study of desire, conflict, and self-control. *Journal of Personality and Social Psychology*, 102(6), 1318–1335**, the experience-sampling study showing that people high in trait self-control reported fewer temptations and less resisting, not more.

Integration with the React/Respond model: The people who are best at this are not the ones white-knuckling through every trigger in the gap. They are the ones whose automatic response has *already been retrained* — so the gap is needed less often.

That expands the application of P.A.C.E. and its benefits:

- **Short term:** Respond overrides React in the moment. Deliberate, effortful, slow.
- **Long term:** repeated Responding *becomes* the new React. The practised response starts firing on cue.

This aligns precisely with the third of Lane et al.'s (2015) ingredients of change from Research Paper 2 — *reinforcing the integrated structure by practising a new way of behaving and experiencing across contexts* — and with the implementation-intention research (Gollwitzer & Sheeran, 2006), whose mechanism is exactly the delegation of a chosen response to automatic, cue-triggered control.

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PART 4 — The Muscle Metaphor

The publication opines that the gap "is not a soft skill. It's a muscle," built through repetition under load. Part of that metaphor is well supported. Part of it has collapsed under replication, and much of the EQ field still teaches the collapsed part.

What collapsed: willpower as a depletable resource.

The strength model of self-control held that self-control draws on a limited resource that runs down with use ("ego depletion") and can be strengthened by training.

Hagger, M. S., Chatzisarantis, N. L. D., et al. (2016). A multilab preregistered replication of the ego-depletion effect. *Perspectives on Psychological Science*, 11(4), 546–573. Twenty-three laboratories, N = 2,141, preregistered protocol. Effect size d = 0.04, with a confidence interval including zero. The authors conclude that if there is an effect, it is close to zero.

Carter, E. C., Kofler, L. M., Forster, D. E., & McCullough, M. E. (2015). A series of meta-analytic tests of the depletion effect: Self-control does not seem to rely on a limited resource. *Journal of Experimental Psychology: General*, 144(4), 796–815. Bias-corrected re-analysis suggesting the plausible effect is zero.

Friese, M., Frankenbach, J., Job, V., & Loschelder, D. D. (2017). Does self-control training improve self-control? A meta-analysis. *Perspectives on Psychological Science*, 12(6), 1077–1099. Small effects that shrink substantially after correcting for publication bias.

See also **Inzlicht, M., Schmeichel, B. J., & Macrae, C. N. (2014). Why self-control seems (but may not be) limited. *Trends in Cognitive Sciences*, 18(3), 127–133**, for the leading alternative account, which frames the experience of depletion as a shift in motivation and attention rather than fuel running out.

What survives: skill built through practice. Repetition does build capability — through habit formation and implementation intentions, not by strengthening a general willpower reserve.

Also, self-control may be trainable, but the evidence does not establish that simply practising the inhibition of automatic responses is what produces the improvement.

The publication builds on what works and what is evidentially supported and doesn't advocate for willpower being a depletable resource. Decision fatigue is not an established science but is a description of the mental fatigue of managing oneself in high-stress situations. Developing skill or trained response to highly challenging situations is more apt and has been expanded upon.

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PART 5 — Self-Awareness: What the EQ Field Teaches vs. What the Research Shows

Self-awareness is the foundation of every major EQ model and the most commonly trained capability. Three findings complicate how it is usually taught.

5.1 Reflection is not insight

Grant, A. M., Franklin, J., & Langford, P. (2002). The Self-Reflection and Insight Scale: A new measure of private self-consciousness. *Social Behavior and Personality*, 30(8), 821–836.

Anthony Grant founded the Coaching Psychology Unit at the University of Sydney, so is a viable research source in the field of leadership development and coaching. The scale separates two factors:

- **Self-reflection** — the need for and engagement in thinking about one's thoughts, feelings and behaviour — correlated *positively* with anxiety and stress.
- **Insight** — clarity of understanding about one's own thoughts, feelings and behaviour — correlated *negatively* with depression, anxiety, stress and alexithymia, and *positively* with cognitive flexibility and self-regulation.

And the detail that should give every EQ programme pause: **participants who kept diaries scored higher on self-reflection but lower on insight** than those who did not.

Correlational, one early study, and journaling can obviously be done well — but the pattern is consistent with co-rumination findings in Research Paper 3 and with the self-distancing research in Research Paper 2. More reflection does not reliably produce more understanding. The quality of reflection matters more than the quantity, and the default forms of reflection — immersed, repetitive, feeling-focused — look more like rumination than insight.

In the P.A.C.E. context: Challenge has been framed as an insight-producing question (*what is actually true here?*), and not an open invitation to reflect (*how do I feel about this?*). The research supports the first and is ambivalent about the second.

5.2 The least skilled are the least aware

Sheldon, O. J., Dunning, D., & Ames, D. R. (2014). Emotionally unskilled, unaware, and uninterested in learning more: Reactions to feedback about deficits in emotional intelligence. *Journal of Applied Psychology*, 99(1), 125–137.

Three studies with professional students. The least emotionally skilled had limited insight into their deficits. Given concrete feedback, low performers disparaged either its accuracy or its relevance and expressed more reluctance than top performers to pursue self-improvement — including paying for professional coaching**.**

Self-report EQ assessments are weakest precisely for the people who most need development. The instrument depends on the capability it is trying to measure. Mattingly and Kraiger (below) make the same point about self-serving bias in EI self-ratings.

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5.3 How you reflect matters more than whether you reflect

The self-distancing research (Ayduk & Kross, 2010; Kross & Ayduk, 2011) covered in Research Paper 2 closes the loop: distanced reflection reduces reactivity and rumination; immersed reflection does not. Put together with Grant and Sheldon, the evidence-based position on self-awareness is:

Self-awareness is not produced by looking inward more. It is produced by looking inward differently — from a distance, toward what is true rather than what is felt — and by accepting outside information the self cannot generate. That is an argument for coaching, and it is a legitimate one.

PART 6 — The EQ Arena: What the Evidence Supports

6.1 The cascade — and support for the P.A.C.E. sequence

Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology*, 95(1), 54–78.

The authoritative meta-analysis on EI and job performance. Three findings are of note:

1. **A confirmed cascade.** Emotion perception precedes emotion understanding, which precedes conscious emotion regulation and job performance. That is a meta-analytically supported sequential model — the same architecture as the awareness → regulation → mature response argument in Research Paper 3.
2. **Two different things share the EI label.** *Ability* EI (measured by performance tests) and *mixed* EI (self-report measures blending personality, motivation and competencies) are distinct constructs. Most corporate EQ products use mixed models, which overlap heavily with personality and cognitive ability.
3. **Context changes the answer.** Ability EI positively predicted performance in **high emotional-labour jobs** and *negatively* in low emotional-labour jobs.

That third finding is directly relevant to a leadership development product. Leadership — managing people, conflict, and morale under pressure — is high emotional-labour work, which is exactly where the evidence says EI pays off. It is not universally valuable for every role.

6.2 EI can be trained

Mattingly, V., & Kraiger, K. (2019). Can emotional intelligence be trained? A meta-analytical investigation. *Human Resource Management Review*, 29(2), 140–155.

Fifty-eight published and unpublished studies. A moderate positive effect for training, regardless of design, robust across participant gender and across ability and mixed-model measures. Two cautions from the same paper: effect sizes were larger in published studies than in dissertations (a signal of publication bias, so we treat the estimate as an upper bound), and self-report EI measures are vulnerable to self-serving bias.

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6.3 Where common EQ teaching has drifted from the science

Commonly taught	What the evidence says	Source
EQ matters more than IQ	Not supported. EI's predictive value is modest, context-dependent, and partly redundant with personality and cognitive ability	Joseph & Newman, 2010
EQ is one thing	Ability EI and mixed EI are distinct constructs; most products measure the second	Joseph & Newman, 2010
The amygdala hijack	Popularisation; not a research construct	Research Paper 2
Willpower is a tank that empties	Ego depletion failed a 23-lab preregistered replication	Hagger et al., 2016
Self-control means resisting harder	High self-control is associated with *less* resisting, via habit	Galla & Duckworth, 2015
Journaling and reflection build self-awareness	Reflection and insight diverge; reflection alone tracks with anxiety	Grant et al., 2002
A self-assessment tells you your EQ	Least skilled overestimate most and reject feedback	Sheldon et al., 2014
Venting releases emotion	Venting amplifies anger; supportive co-rumination predicts rising distress	Research Paper 3 (Bushman; Rose)
Emotional regulation means staying calm	Mature regulation is flexible: context sensitivity, repertoire, feedback	Research Paper 3 (Bonanno & Burton)
The 6-second / 90-second rule	No empirical basis for a fixed emotional half-life	Research Paper 2, Part 3
Mindfulness is a proven universal regulator	Evidence is real but uneven and routinely overstated	Van Dam et al., 2018

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PART 7 — Evidence Grading and Open Items

Claim	Grade
Some emotional responding is fast, cue-triggered and precedes deliberation	**Strong**
Automatic and deliberate processes form a clean two-type package	**Contested** — avoid
Implicit (automatic) regulation is necessary for wellbeing, not a lesser form	**Strong** — Gyurak et al., 2011
High self-control operates through habit more than effortful inhibition	**Strong** — Galla & Duckworth, 2015
Deliberate practice can retrain automatic responses	**Strong** — habit, implementation intentions, Lane et al.
Willpower is a depletable resource	**Not supported** — Hagger et al., 2016
Self-reflection and insight are separable, with opposite correlates	**Moderate** — correlational
Low-EI individuals overestimate their EI and resist feedback	**Strong** — Sheldon et al., 2014
Ability EI follows a perception → understanding → regulation cascade	**Strong** — Joseph & Newman, 2010
EI predicts performance in high emotional-labour roles	**Moderate** — meta-analytic, context-dependent
EI is trainable	**Moderate** — Mattingly & Kraiger, 2019; publication bias noted

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See Research Paper 2 for: Ayduk & Kross (2010); Gollwitzer & Sheeran (2006); Kross & Ayduk (2011); Lane et al. (2015). See Research Paper 3 for: Bonanno & Burton (2013); Bushman (2002); Rose (2002).

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Research Paper 5: Psychological Safety and the Workplace

Evidence base for translating P.A.C.E. into a leadership product. Psychological safety is covered in depth; the ten workplace topics in brief — what the evidence says, how P.A.C.E. connects, key references, and evidence strength.

At a Glance

Topic	*Summarised Finding*	*Strength*
Accountability	Its effect depends entirely on how and when it is applied	Strong
Change	The "70% of change fails" statistic has no empirical basis	Strong *(as myth-buster)*
Conflict	Task conflict helps teams *only* under high psychological safety	Strong
Emotional contagion	A leader's mood transfers to individual members and to the group's affective tone	Moderate-to-strong *(experimental; mainly laboratory)*
Executive presence	Popular construct, thin evidence, perception-based	Weak
Feedback	Improves performance on average, but over a third of feedback interventions make it worse	Strong
Leading across generations	Generational differences in work attitudes are small to near zero	Strong
Psychological safety	Robust predictor of learning, voice and performance — *and* can enable slacking and unethical behaviour without standards	Strong
Resilience	Resilience is common; training effects are small and fade	Moderate
Trust	Trust in leaders reliably predicts performance and commitment	Strong
Validation	Invalidating responses increase another person's emotional and physiological reactivity; validating responses do not	Moderate *(experimental; clinical origins, not yet tested in workplace settings)*

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PART 1 — PSYCHOLOGICAL SAFETY

1.1 The definition, and what it is not

Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. The founding study. Psychological safety is a shared belief that the team is safe for interpersonal risk-taking — speaking up, asking questions, admitting mistakes, disagreeing — without fear of humiliation or punishment.

Two distinctions matter for a leadership application:

- **Psychological safety is not trust.** Trust is an individual's expectation about *another person*. Psychological safety is a *group-level* belief about how *I* will be treated if I take an interpersonal risk. You can trust your manager and still not feel safe to challenge them in front of the team.
- **Psychological safety is not comfort.** It is not niceness, the absence of conflict, or lowered standards. This is the single most common misreading in corporate practice, and the latest research (1.3) shows why it matters.

1.2 The state of the field

Anchor citation: Edmondson, A. C., & Bransby, D. P. (2023). Psychological safety comes of age: Observed themes in an established literature. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 55–78.

The most current authoritative review, covering peer-reviewed research from 2013–2021. The authors describe psychological safety as a state of reduced interpersonal risk and identify four dominant research themes: **getting things done, learning behaviours, improving the work experience, and leadership.** Their conclusion is that psychological safety plays important roles in enabling organisations to learn and perform in dynamic environments, and that its significance has grown with the increasingly complex and interdependent nature of work.

Important note: this frames psychological safety as a performance condition rather than a wellbeing perk.

Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, 70(1), 113–165.

The definitive quantitative synthesis: 136 independent samples, over 22,000 individuals and nearly 5,000 groups. It maps antecedents and outcomes, and tests whether psychological safety predicts task performance and citizenship behaviour *beyond* related concepts such as positive leader relations and work engagement.

Key takeaways: psychological safety is associated with learning behaviour, information sharing, engagement and performance; its strongest levers are leadership and team design; and at the individual level, emotional stability, proactive personality and learning orientation are significant predictors.

The emotional-stability finding is an important bridge to the P.A.C.E. framework. Psychological safety is not only something leaders create *for* people — how individuals regulate emotion shapes whether they experience it. That is the P.A.C.E. context.

Supporting leader-behaviour evidence:

- **Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27(7), 941–966.** Leader inclusiveness — explicitly inviting and appreciating input — builds psychological safety and offsets status hierarchies.

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- **Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, 50(4), 869–884.** Leader openness predicts whether people actually speak up; a stated "open door" is not enough.

Industry caution: Google's Project Aristotle (2015–16) is widely cited as proving psychological safety is the top predictor of team effectiveness. It was an internal study, not peer-reviewed. It might be useful as an illustration, but never as evidence.

1.3 The latest research: psychological safety has a shadow side

This is the most important update for the leadership product, and most corporate psychological safety training omits it.

Deng, H., Leung, K., Lam, C. K., & Huang, X. (2019). Slacking off in comfort: A dual-pathway model for psychological safety climate. *Journal of Management*, 45(3), 1114–1144.

The authors note that research had focused almost entirely on psychological safety's benefits for risk-taking, and propose a dual-pathway model. Psychological safety climate encourages voice and learning — but can *also* reduce felt obligation and effort. The title says it: people can slack off in comfort.

Pearsall, M. J., & Ellis, A. P. J. (2011). Thick as thieves: The effects of ethical orientation and psychological safety on unethical team behavior. *Journal of Applied Psychology*, 96(2), 401–411.

In teams with a utilitarian ethical orientation, psychological safety was associated with *more* unethical behaviour. Safety makes it easier to speak up — including about cutting corners together.

The reconciling framework — Edmondson's safety × standards matrix (Edmondson, 2018, *The Fearless Organization*):

	Low standards	**High standards**
High psychological safety	Comfort zone	Learning zone
Low psychological safety	Apathy zone	Anxiety zone

Psychological safety only produces performance *when paired with high standards and accountability*. Without them, it produces comfort. This is the research answer to the executive who says "psychological safety sounds like coddling" — and it is the same argument the publication makes about the culture at large. Safety without structure is the corporate version of expression without regulation.

1.4 Where P.A.C.E. fits

P.A.C.E. is, in effect, the individual-level practice that makes the learning zone possible:

- **Pause** — the leader's regulation is what keeps a risk-taker's candour from being met with a reaction that teaches the team not to speak again.
- **Affirm** — this is leader inclusiveness in action (Nembhard & Edmondson): acknowledging what is real before correcting it.
- **Challenge** — this is the "high standards" axis. P.A.C.E. never stops at comfort.
- **Encourage** — maintains the relationship after challenge, so safety survives the standard being enforced.

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PART 2 — WORKPLACE APPLICATIONS

- **ACCOUNTABILITY**

Evidence. Accountability is not one thing. In Lerner and Tetlock's review, accountability improves thinking when people know *in advance* they will explain their reasoning to an audience whose views are unknown — producing more careful, complex judgement. Accountability to a known audience produces conformity; accountability imposed after a decision produces defensive self-justification. Combined with Edmondson's matrix (1.3) and Deng et al., the picture is consistent: **safety without accountability produces comfort; accountability without safety produces anxiety and cover-up.**

P.A.C.E. link. Challenge is accountability delivered as a question about reasoning ("walk me through how you got there") rather than a verdict after the fact. That is the form of accountability the research supports. It also supports the "trigger" topic in the publication: naming a trigger does not remove accountability for the response.

References. Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125(2), 255–275. · Edmondson (2018). · Deng et al. (2019).

Strength: Strong

- **CHANGE**

Evidence. The widely cited claim that 70% of change initiatives fail was traced by Hughes to five published sources; he found **no valid and reliable empirical evidence** for it, with the trail leading largely to an informal estimate about business process reengineering. What *is* well established is that how people experience change — participation, information, fairness and trust in leadership — shapes whether they support or resist it (Oreg et al., 2011).

P.A.C.E. link. Resistance to change is often a React: a threat response to uncertainty, running on older stories about what change has cost people before. P.A.C.E. gives leaders a way to engage that reaction (Affirm the loss, Challenge the story) rather than labelling it resistance. Psychological safety is a named enabler of learning through change in Edmondson and Bransby's review.

References. Hughes, M. (2011). Do 70 per cent of all organizational change initiatives really fail? *Journal of Change Management*, 11(4), 451–464. · Oreg, S., Vakola, M., & Armenakis, A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *Journal of Applied Behavioral Science*, 47(4), 461–524.

Strength: Strong on the myth; moderate on mechanisms.

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- **CONFLICT**

Evidence. Early meta-analysis found both task and relationship conflict harmed team performance (De Dreu & Weingart, 2003). A larger update found the picture more nuanced: relationship conflict is consistently harmful, but task conflict is not uniformly negative (de Wit, Greer & Jehn, 2012). The decisive study for the publication's purposes: across 117 project teams, **task conflict was positively associated with performance under high psychological safety**, and not otherwise (Bradley et al., 2012).

P.A.C.E. link. This is the cleanest workplace evidence in the whole document. Disagreement about the work helps teams — *if* people can disagree without it becoming personal. P.A.C.E. is precisely the practice that keeps task conflict from turning into relationship conflict: Pause prevents escalation, Affirm separates the person from the position, Challenge stays on the substance.

References. *De Dreu, C. K. W., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. Journal of Applied Psychology*, 88(4), 741–749. · de Wit, F. R. C., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology*, 97(2), 360–390. · Bradley, B. H., Postlethwaite, B. E., Klotz, A. C., Hamdani, M. R., & Brown, K. G. (2012). Reaping the benefits of task conflict in teams: The critical role of team psychological safety climate. *Journal of Applied Psychology*, 97(1), 151–158.

Strength: Strong

- **EMOTIONAL CONTAGION**

Evidence. Emotional contagion is the tendency to automatically mimic and converge with the emotional expressions of others, and so to come to share their emotional state (Hatfield, Cacioppo & Rapson, 1993). The phenomenon operates at group level, not just between two people. In a laboratory study of managerial decision-making, Barsade seeded small groups with a trained confederate enacting different mood conditions, and found the predicted contagion effect using both outside coders' ratings of participants' mood and participants' own reports. Contagion also shaped individual attitudes and group processes. Groups exposed to positive contagion showed improved cooperation, less conflict and higher perceived task performance.

The effect is especially pronounced when the source is the leader. When leaders were in a positive rather than a negative mood, individual group members experienced more positive and less negative mood, and the group as a whole had a more positive affective tone. Groups with positive-mood leaders also coordinated better, although they expended less effort than groups with negative-mood leaders (Sy, Côté & Saavedra, 2005). That last finding is an important nuance. Contagion research does not show that negative emotion is always harmful to group functioning. It shows that the leader's emotional state reliably transfers to the group.

Limitations: Both core studies are laboratory experiments, one using a trained confederate and the other induced mood. Contagion as a phenomenon is well established, but the size of the effect in real work groups over time is less precisely measured**.**

P.A.C.E. link. Contagion is the mechanism behind the observation that reactivity multiplies. A leader's unregulated reaction does not stay with the leader. It sets the emotional tone the team then works inside. The Sy et al. finding matters here because it rules out the wrong conclusion. The answer is not for leaders to display only positive emotion, which would simply be suppression under a new name. The answer is for leaders to be regulated in what they carry into the room, because the room tends to catch it. The Pause step is the point at which a leader decides what the team will catch.

References. Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly, 47*(4), 644–675. https://doi.org/10.2307/3094912 · Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Science, 2*(3), 96–100. · Sy, T., Côté, S., & Saavedra, R. (2005). The contagious leader: Impact of the leader's mood on the mood of group

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members, group affective tone, and group processes. *Journal of Applied Psychology, 90*(2), 295–305. https://doi.org/10.1037/0021-9010.90.2.295

Strength: Moderate to Strong

- **EXECUTIVE PRESENCE**

Evidence. Thin and not well supported. The most-cited peer-reviewed study is qualitative — interviews with 34 professionals. It found executive presence is based on **audience perceptions**, formed partly from first impressions (status, appearance, projected confidence, communication, engagement) and partly from evaluations over time (integrity, values-in-action, expertise, delivery, use of power). Practitioner work has also flagged that presence judgements can disadvantage women and minority leaders when they rest on first-impression cues.

P.A.C.E. link. Build the leadership module on the *over-time* characteristics, which are where emotional regulation lives: how a leader behaves under pressure is the substance behind "presence." A regulated leader's emotional displays also shape followers — leaders' emotions function as social information for their teams (Van Kleef, 2009). This permits us to offer executive presence grounded in character rather than polish, and hence avoid the equity problems of the appearance-based version.

References. Dagley, G. R., & Gaskin, C. J. (2014). Understanding executive presence: Perspectives of business professionals. *Consulting Psychology Journal: Practice and Research*, 66(3), 197–211. · Van Kleef, G. A. (2009). How emotions regulate social life: The emotions as social information (EASI) model. *Current Directions in Psychological Science*, 18(3), 184–188.

Strength: Weak — training positions as practice-informed, not evidence-backed.

- **FEEDBACK**

Evidence. Kluger and DeNisi's meta-analysis (607 effect sizes, 23,663 observations) found feedback improved performance on average (d = .41) — but over one third of feedback interventions decreased performance, and this could not be explained by sampling error or whether the feedback was positive or negative. The key moderator: feedback effectiveness declines as attention moves toward the *self* and away from the *task*. Feedback that feels like a verdict on the person triggers threat and pulls resources away from improvement.

Leaders with the lowest emotional intelligence are also the most likely to dismiss feedback about it (Sheldon, Dunning & Ames, 2014; see Research Paper 4).

P.A.C.E. link. Affirm keeps the receiver out of self-threat; Challenge keeps the conversation on the task and the story, not the person. For the receiver, Pause is the capacity to take in feedback before defending against it.

References. Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance. *Psychological Bulletin*, 119(2), 254–284. · Sheldon, O. J., Dunning, D., & Ames, D. R. (2014). Emotionally unskilled, unaware, and uninterested in learning more: Reactions to feedback about deficits in emotional intelligence. Journal of Applied Psychology, 99(1), 125–137. https://doi.org/10.1037/a0034138

Strength: Strong.

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- **LEADING ACROSS GENERATIONS**

Evidence. A meta-analysis of 20 studies and 19,961 people across four generations found generational differences in job satisfaction, commitment and turnover intention were small to essentially zero, and concluded that apparent differences are likely due to factors other than generational membership. The National Academies (2020) reached the same conclusion for workforce management generally. Age, career stage and life circumstances explain far more.

P.A.C.E. link. This is where the leadership application needs the framing established in the white paper and Research Paper 1: the argument concerns the emotional culture each cohort was formed in, not fixed generational traits. For leaders, the practical message is: expect different default *stories* about feelings and feedback, shaped by formative culture, but lead the individual in front of you. P.A.C.E. is designed for exactly that — it works on the person's actual story, not their birth year.

References. Costanza, D. P., Badger, J. M., Fraser, R. L., Severt, J. B., & Gade, P. A. (2012). Generational differences in work-related attitudes: A meta-analysis. *Journal of Business and Psychology*, 27(4), 375–394. · National Academies of Sciences, Engineering, and Medicine. (2020). *Are generational categories meaningful distinctions for workforce management?* Washington, DC: The National Academies Press. doi:10.17226/25796

Strength: Strong.

- **RESILIENCE**

Evidence. Two findings reframe resilience training. First, resilience is the *common* response to adversity, not a rare trait (Bonanno, 2004). Second, a meta-analysis of workplace resilience-building programmes found a small overall effect (d = 0.21) that diminished over time (d = 0.26 shortly after, 0.07 later). Resilience as a construct is also loosely defined in organisational research (Britt et al., 2016).

P.A.C.E. link. Stand-alone resilience workshops fade. Consistent with Research Paper 4 (habit and trained response), resilience is better built into daily practice and team climate than delivered as an event. P.A.C.E. is positioned as the practice through which resilience is built, not as a resilience programme.

References. Vanhove, A. J., Herian, M. N., Perez, A. L. U., Harms, P. D., & Lester, P. B. (2016). Can resilience be developed at work? *Journal of Occupational and Organizational Psychology*, 89(2), 278–307. · Bonanno, G. A. (2004). Loss, trauma, and human resilience. *American Psychologist*, 59(1), 20–28. · Britt, T. W., Shen, W., Sinclair, R. R., Grossman, M. R., & Klieger, D. M. (2016). How much do we really know about employee resilience? *Industrial and Organizational Psychology*, 9(2), 378–404.

Strength: Moderate.

- **TRUST**

Evidence. The standard model defines trustworthiness through three perceived qualities: **ability, benevolence and integrity** (Mayer, Davis & Schoorman, 1995). Meta-analytic evidence shows trust in leadership is associated with job performance, citizenship behaviour, commitment and satisfaction (Dirks & Ferrin, 2002). Remember the distinction from 1.1: trust is about the leader; psychological safety is about the team climate. Both matter, and they are not interchangeable.

P.A.C.E. link. Benevolence and integrity are demonstrated precisely under pressure — which is when regulation either holds or doesn't. A leader who Pauses rather than reacts, and whose Challenge is followed by Encourage, is building the benevolence and integrity components of trust in real time.

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References. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734. · Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87(4), 611–628.

Strength: Strong

- **VALIDATION**

Evidence. Validation means communicating that another person's emotional experience is understandable and legitimate. Invalidation means dismissing, correcting or punishing that experience. The concept of validation has important roots in Linehan's biosocial theory, which proposes that emotion regulation develops through an interaction between individual emotional vulnerability and the responses of the surrounding environment (Linehan, 1993, pp. 42–51). The effect of those responses is measurable in the moment. In an experimental study, participants who received invalidating responses during a stressful task reported significantly more negative affect than those who received validating responses. They also showed greater increases in heart rate over time and elevated skin conductance, both markers of physiological arousal (Shenk & Fruzzetti, 2011). The authors conclude that the findings support treating social responses as determinants of emotional reactivity and regulation, not merely as its background.

More recent work adds nuance. In a within-subjects study of 126 participants, the effects of validation differed depending on which emotion was being validated. For example, validating anger and shame reduced heart rate, while validating fear and sadness did not. Effects also varied with the person's level of emotion dysregulation (Kuo et al., 2022). Validation is not a single uniform intervention, and its effects depend on the emotion and the person.

Limitations. Both studies are laboratory experiments with student samples, and the construct was developed in clinical settings, principally dialectical behaviour therapy. The direction of the core effect is consistent: invalidation increases reactivity. However, its size and durability in workplace relationships have not been directly measured.

P.A.C.E. link. Validation is the evidence base for the external direction of Affirm. When a leader dismisses or argues with what someone feels, the research suggests the person's reactivity rises, emotionally and physiologically. That is the point at which communication breaks down and conflict escalates. When the emotion is acknowledged, the person no longer needs to defend it, and the conversation can move to its substance. Validation acknowledges the emotion and the understandable reasons behind a reaction. It does not endorse every behaviour the reaction produced. That distinction is what allows Affirm to be followed by Challenge. The Kuo et al. findings also support teaching Affirm as a skill of reading the specific emotion in front of the leader, rather than a generic script.

References. Kuo, J. R., Fitzpatrick, S., Ip, J., & Uliaszek, A. (2022). The who and what of validation: An experimental examination of validation and invalidation of specific emotions and the moderating effect of emotion dysregulation. *Borderline Personality Disorder and Emotion Dysregulation, 9*, Article 15. https://doi.org/10.1186/s40479-022-00185-x · Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. Guilford Press. · Shenk, C. E., & Fruzzetti, A. E. (2011). The impact of validating and invalidating responses on emotional reactivity. *Journal of Social and Clinical Psychology, 30*(2), 163–183. https://doi.org/10.1521/jscp.2011.30.2.163

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