Human Systems:
Therapy, Culture and Attachments

Article

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Staying alive: A 21st century agenda for mental health, child protection and forensic services

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Abstract

Mental health treatment, child protection and forensic services for criminality need major re-organisation in conceptualisation and service provision. This need results from the failure of current diagnostic methods, administrative organisations and treatment approaches to reduce the prevalence of mental illness, child maltreatment or criminal behaviour. We propose that defining these problems as individual deficits and responding to them by category of harm (to self, progeny and others, respectively) stands in the way of effective prevention and treatment. We address four topics: (1) the common basis of all of these problems in unprotected and uncomforted exposure to danger, (2) the developmental process of psychological maladaptation that occurs interpersonally in endangered families, (3) the behavioural expression of psychological development as protective strategies that can be adaptive or maladaptive, depending upon the context in which they are used, and (4) proposals for systemic change that could improve prevention and treatment. These proposals include using functional formulations to guide treatment planning, single portal entry to assessment and services, integrated universal transdisciplinary training followed by specialisation for all mental health professionals, delivering customised treatment through transitional attachment relationships and consolidating disparate disciplines in 'departments of human adaptation'.

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Life has always been dangerous. Responding to danger to stay alive individually and reproduce across generations is considered the central process that drives evolution, particularly the evolution of the brain (Barrett, 2020; Cosmides and Tooby, 1994, 2013; Watson, 2008). We propose that in cases of mental illness, child maltreatment and criminality, the individual's response to danger is harmful. Specifically, mental illness harms the self and increases the probability of one's own early death. Child maltreatment harms one's progeny and increases the probability of their early death. Criminal acts harm others, including the death of others. Also, in each case, maladaptive behaviour reduces one's genetic presence in the next generation.

The recent half-century has introduced changes to (a) defining and treating mental illness, (b) recognising the existence of child maltreatment and creating administrative structures to protect children and (c) protecting the population from criminals. Nevertheless, the growth in child protection, mental health and forensic criminal justice has not reduced the prevalence of these problems (Children's Bureau, 2018; Olfson et al., 2019; US Bureau of Labor Statistics, 2019).

We think that improvements in mental illness, child maltreatment and criminality cannot be successful if they only refine existing approaches to diagnosis, assessment and treatment. Instead, we think that improvements must focus on the root causes of problems, address the developmental processes that yield harmful behaviour and change the treatment structures that respond to problems. To address causation, we describe a developmental model of adaptation and maladaptation in Part 1. Part 2 offers ideas for fundamental changes in service delivery: functional formulations as a new basis for treatment planning, unified intake and assessment procedures, transdisciplinary basic training followed by layers of specialisation, customised treatment delivered by professionals functioning as transitional attachment figures and departments of human adaptation to consolidate the many schools and departments that currently deliver mental health services. None of these ideas is wholly new, but their arrangement in a coherent model of causation and cross-disciplinary response is new and far-reaching in its potential to help troubled people.

1. Part 1: A model of adaptation and maladaptation

Everything in life hinges on protecting ourselves and our progeny from danger and that, in turn, hinges on having good information about the danger and possible protective responses. We present evidence that attachment relationships are crucial to learning to use information to predict danger and organise protective strategies. The most important attachments are child–parent and parent–parent. The influences on development can be summarised as five systems that influence each other, as represented in Figure 1. We place attachment at the intersection of individual psychology (influenced by genetic information

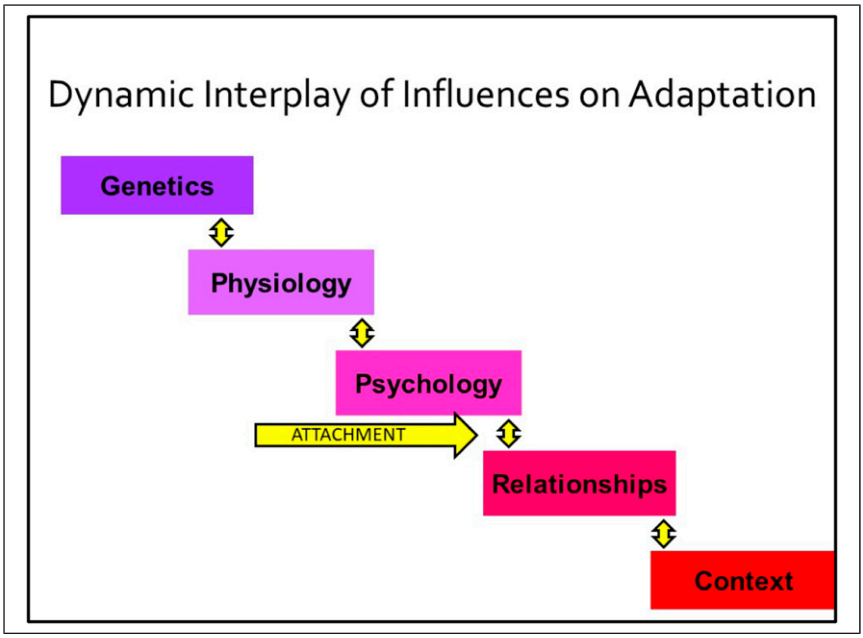

Figure 1. Dynamic interactive influences on human survival and adaptation. Used with permission of Patricia M Crittenden.

and bodily functioning) and family systems (which transmit cultural and environmental contexts) (see Figure 1).

To describe causal processes, we introduce the Dynamic-Maturational Model of Attachment and Adaptation (DMM, Crittenden, 1997a, 2016) as a comprehensive and parsimonious model that addresses protection from danger by integrating other theories' strengths. Rather than creating a new theory, the DMM brings together ideas and findings from many approaches to maladaptation. However, unlike most theories of maladaptation, the DMM also addresses adaptation and considers all protective strategies to be a strength – in some context. Thus, the DMM has the breadth to address most maladaptive behaviour with a few simple principles that concatenate to an infinite variety of individual differences. These differences can be clustered at different levels of specificity to facilitate various types of intervention.

1.1. Danger and adaptation

Every exposure to danger provides information that individuals can use to predict and prevent future danger. To make predictions, individuals transform information about the past (Barrett, 2020; Crittenden, 1997a; Clark, 2016; Schacter et al., 2017). Erroneous transformations that do not fit future circumstances can put both life and psychological well-being at risk.

The brain, as the organ that uses information to make predictions and initiate protective action, is most vulnerable to error when it is immature. Experiencing danger in infancy and childhood *without protection and comfort* by parents is therefore expected to generate more erroneous transformations than danger in adulthood (Opendak et al., 2017; Perry et al., 2017). We propose that facing danger with outdated or erroneous transformations lies at the root of mental illness, child maltreatment and criminality (Baetz and Widom, 2020; Crittenden, 1999; Wilkinson et al., 2019). That is, danger itself does not lead to maladaptive behaviour or psychological trauma; instead, erroneous information about danger creates these risks.

On the other hand, when we are prepared, protecting ourselves and others from danger propels development forwards (Ellis et al., 2020). We stay alive, and our brains generate new and more protective transformations. Service managers and mental health practitioners need to understand these developmental processes to understand *which* dangers might result in psychological trauma. They also need to understand the neuropsychological processes that must change to resolve the effects of past psychological trauma. Finally, professionals need a basis for selecting appropriate interventions and treatments (McLaughlin and Lambert, 2017).

Currently, most forms of treating 'mental illness', child maltreatment and criminality do not address maladaptation. We mark mental illness with quotes because if maladaptation results from past exposure to danger and its effects on information processing, it is not an illness per se. We propose three conditions in which information processing about danger is insufficient: (1) an immature brain that cannot fully process the information, (2) such imminent danger that taking the time for sufficient processing might be fatal and (3) events where crucial aspects of the threat are not visible. Put another way, immaturity, imminent danger and complex causation can result in action without sufficient processing. We call incomplete processing *psychological shortcuts* (Crittenden, 2016).

Empirical work on adverse childhood experiences (American Psychological Association, 2021; Edwards et al., 2003; Felitti, 2009) is homing in on a similar perspective for childhood dangers. We propose that a child's experience of danger beyond what the child can manage without adult protection or comfort can result in psychological trauma. In such cases, the child must act on incomplete information. A particular threat is that a psychological shortcut initiates maladaptive behaviour before the situation becomes conscious. In this case, the shortcuts – and not the danger itself – become the cause of maladaptation. This layered hypothesis (1) moves beyond mental illness, ACEs, etc., (2) permits psychological problems, child maltreatment and criminality to be treated as arising from a single cause operating similarly despite differences in presentation and (3) is open to empirical testing. It is a probabilistic hypothesis with person-specific flexibility for all living humans and those yet to be born. We look forward to expanding the growing body of research on ACEs with the nuanced ideas regarding development and attachment figures' response offered here.

1.2. Brain development

Babies are born with the genetically based capacity to survive if an adult takes care of them. Their brains expect such input (Sullivan, 2017) and mature at a rate that prepares

them to take maximum advantage of information from their experience with parents (Barrett, 2020). The parent has a mature brain already shaped by their developmental experience, especially their experience of danger. In a universal *pas de deux* of survival, infants express their needs and parents respond. Parents' responses shape the synaptic connections of activated neural networks in the infant's brain. When adult behaviour is within the infant brain's range to perceive and respond (that is, in the infant's *zone of proximal development* (ZPD; Vygotsky, 1978)), development proceeds smoothly.

However, when something threatening occurs and the infant is neither protected nor comforted, the infant brain must cobble together a neural network to generate protective behaviour. This network almost always includes some irrelevant information and excludes some relevant information that is outside the infant's ZPD. Put another way, the infant's response will be a psychological shortcut. Such short-cutting can occur even in adulthood, but the most enduring shortcuts form before consciousness is possible. Of course, if the parent corrects the misunderstanding, the shortcut can be repaired. But when parents also feel threatened, they might not want to think about the danger – and the psychological shortcut might be carried forwards to later ages. In addition, if the context changes or the standards for behaviour change at older ages, a formerly protective psychological shortcut might become maladaptive.

1.3. Dispositional representations and memory systems

Activated neural networks dispose all behaviour. For ease of conceptualisation, we call these networks somatic[1] (information coming from bodily organs), cognitive (information based on the temporal order of information arriving to the brain) and affective (information coming from the outer context). Thus, the brain represents 'the self in connection with non-self' in multiple ways concurrently (Eagleman, 2011; Schacter and Tulving, 1994). Because these activated neural networks dispose action (Crittenden, 1990; Damasio, 1996), we call them *dispositional representations* or DRs.

Tulving and his colleagues clustered DRs as memory systems, each based on different neural processing. Their work highlights how new techniques (e.g. brain imaging) change the model. The three memory systems in Tulving (1979) became five in Schacter and Tulving (1994) and more in Devitt et al. (2017). Similarly, the DMM has evolved; there were five memory systems initially, then six in 2008 and, by adding somatic information, eight in 2016 (see Figure 2). Source memory and working memory are considered subtypes of episodic memory and reflective integration.

Memory systems also denote brain state in terms of the order in which information might dispose action and its accessibility to conscious thought (see Figure 2). Individuals differ in reliance on somatic, cognitive or affective DRs; these differences result from experience and influence future behaviour. Individuals also differ in whether they tend to act (1) quickly on preconscious DRs, (2) with moderate speed but greater clarity on conscious, linguistic DRs based on past integration, or (3) more slowly on DRs resulting from current conscious reflection. Repeated activation of a neural network strengthens the connecting synapses, thus priming the network and its disposed response. Conversely, infrequently activated pathways are pruned. A particular feature of early developing neural networks is that rapid responding reduces the

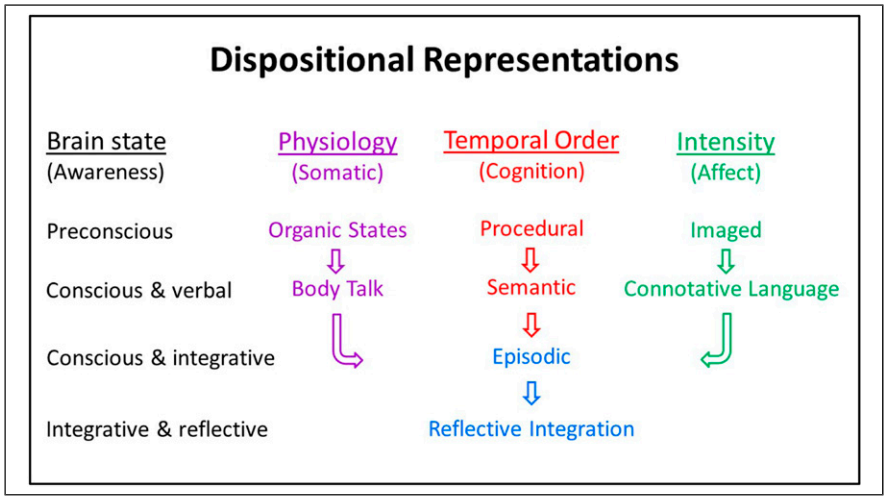

Figure 2. Dispositional representations as a function of brain state and memory systems. Used with permission of Patricia M Crittenden.

probability of conscious awareness, reflection and intentional modification of the response.

At any moment, multiple pathways are initiated, with some proceeding separately and others coming together and then proceeding with greater intensity; together, these pathways result in multiple disposed actions (Eagleman, 2011). There are two types of action: (1) response and (2) inhibition of response (i.e. stilling, freezing and catatonia) (Baldwin, 2013). Neither the representations nor the actions are necessarily identical or even compatible. Thus, one can 'be of two minds' or even more.

Concurrent with this bottom-up accretion of information is a top-down search for evidence to fit existing models (Clark, 2016). Thus, multiple brain systems, each processing information differently, race upwards towards the cortex and downwards from the cortex to find the best fitting model of 'the self now in this context'. Further, the self is both the self-from-the-past and the self now.

Because every context is new in some way, the brain seeks discrepancy (Clark, 2016: 28–29); discrepancy is where information about new conditions can be found. By focusing on discrepancy, the brain maximises its potential to discover the information that will be key to protecting the self under the new conditions (cf. Bateson, 1972/2000). Because the information might come from any source (somatic, cognitive and affective), appear at any layer of processing (from preconscious to reflective) and fit or be discrepant with current models, the process can be considered a reciprocal dynamic convergent representation of self.

1.4. Psychological trauma

Current thinking differentiates typical behaviour from psychological trauma. We think the distinction is artificial. The same principles apply to all neural networks, regardless of

whether or not the resulting behaviour is considered a trauma response. The most important principle is that the brain evolved to promote survival and reproduction (Sutherland and Mather, 2012). Consequently, any challenge to survival or reproduction is given priority (in the form of lower thresholds for action and stronger synaptic connections) over other representations (Masson et al., 2020). Neurotransmitters are a crucial part of the functional connections between activated neurons. Changes in neurotransmitters regulate the probability and speed of neural firing (and the consequent probability of enacting disposed behaviour). Simpler, less differentiated networks represent threats to survival or reproduction that occur early in life. Dangerous events occurring early in life tend to result in enacted responses more rapidly than events occurring at older ages (Herzberg and Gunnar, 2020).

To conclude, behaviour results from a probabilistic gamble (Clark, 2016) with three conditions that promote priming of neural networks: (1) events that threaten survival or reproduction, (2) repeated neural events and (3) events that occur early in life. When these conditions co-occur, the probability increases for rapid, preconscious behavioural responses that are maladaptive, that is, a response that does not fit current requirements. Clinicians often call these 'trauma responses' (and therapies directed to them are 'trauma-informed' therapies).

The neural networks that underlie psychological trauma are not different from other neural networks; instead, they only denote fast-track priority over potentially competing 'non-trauma' networks. Thus, neural networks that dispose protective behaviour are on a continuum from urgently necessary to enact (either with action or inhibition of action) to, at the other end, non-urgent and having the possibility of reflection. In the middle, ordinary behaviour, including strategic responses to danger, varies in urgency. This framing suggests that urgent 'trauma' networks are protective responses (Crittenden, 1997b; Feldman and Vengrober, 2011) – unless the original conditions no longer pertain. Rather than indicating how fragile humans are, such responses indicate how exquisitely we have evolved to identify danger and protect ourselves, even very early in life (Ellis et al., 2020). This 'strengths approach' to understanding psychological trauma can help mental health professionals understand maladaptive behaviour and connect positively with people whose behaviour is distressing or harmful. In the next section, we describe how this looks behaviourally.

1.5. Protective strategies for staying alive

1.5.1. The behavioural characteristics of protective strategies. People use self-protective strategies to protect and comfort themselves when they feel threatened. When they are children, the best strategy is to get a grown-up to help to protect them. That protector is their 'attachment figure' – usually their mother or father. Of course, it is best if there are two parents firmly attached to each other in a committed relationship. Networks of attached people are the extended families into which babies are born. With the array of protective strategies and the resources that two joined family networks bring, children have the best chance of surviving and thriving. To thrive, children must combine genetic directions for neural maturation with learning from family members about how to be safe in their cultural or subcultural context (see Figure 1). With these inputs, children can

develop protective strategies to care for themselves, find reproductive partners and begin the cycle anew with their children.

1.5.1.1. A model of protective strategies. The DMM is a bio-psycho-socio-ecological model (see Figure 1) with a fulcrum, a point on which the many forces that affect survival coalesce, creating a balance that promotes survival over time or an imbalance that might jeopardise survival at one or more developmental periods. This point is the protective attachment between two people around the vital functions of giving and receiving protection and comfort (see the yellow arrow in Figure 1). The child–parent relationship shapes the child's brain (Esposito et al., 2017; Perry et al., 2017; Sullivan, 2017). The resulting pattern of processing information, in turn, becomes the basis for the child's protection and comfort-seeking behaviour, which affects the parent's protective and comfort-giving behaviour, and so forth.

Each attachment relationship is characterised by the protective strategies that function best to promote survival and reproduction in the context of other family relationships and extrafamilial conditions. Families consist of multiple attachment relationships that support each other or compete and that change over time. Herein lies the basis for most problems brought to family therapists (Sloman and Sturman, 2012) and, we propose, to individual therapists, child protection authorities and the police as well. Keeping this basis in mind can help service managers and mental health professionals avoid limiting treatment to symptom reduction. Instead, a focus on the underlying conflicts among different ways of protecting oneself or between self-protection and child protection may prove more fruitful and efficient.

1.5.1.2. Protective strategies. The DMM describes many possible protective strategies (Crittenden, 2016) in a two-dimensional model (see Figure 3), with intelligence providing a third dimension that affects speed and breadth of processing (Panizzon et al., 2014). The

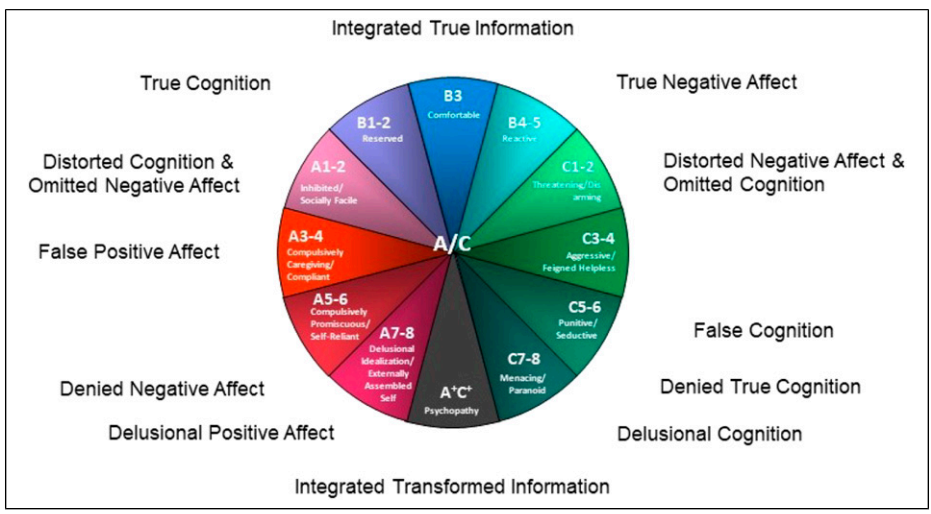

Figure 3. The dynamic-maturational model of protective strategies. Used with permission of Patricia M Crittenden.

horizontal dimension indicates the extent to which strategies use information about cognition or affect; in this model, cognitive strategies are labelled 'A', affective strategies are 'C', with 'B' strategies characterised by unbiased use of both cognition and affect. Intense or pervasive somatic activation, without evidence of physical dysfunction, usually means that neither cognition nor affect has yielded a solution to the threat. The vertical dimension describes how cognitive or affective information, gathered in the past, is transformed to predict the future (Crittenden, 2016, chapter 6). The transformations range from truly predictive (untransformed) information to omitted from processing and erroneously included in processing, distorted, falsified, denied and delusionally transformed. Previous research indicates that more transformed information (used in high numbered DMM strategies) is associated with psychiatric diagnoses (Hughes et al., 2000; Landini et al., 2016; Pace and Bufford, 2018).

Each strategy functions to prevent rejection or attack in the short-term and death in the long-term. Developmentally, preventing rejection and abandonment is what babies must immediately do to survive. Avoiding rejection is also necessary for reproduction, that is, the survival of the species. When they accept a life partner, adults extend their self-protective strategies to include protecting their partners. When their children are born, these strategies are adapted to become child-protective strategies. When self-, partner- and child-protective strategies are incompatible, there is the possibility of conflict and relationship-based danger (Dallos et al., 2019, 2020).

In Table 1 and Figure 3, the higher numbered 'A' and 'C' strategies reflect exposure to more severe, pervasive and deceptive danger. Table 1 describes each strategy's behavioural and information processing characteristics.

1.5.1.3. Psychiatric disorder, child maltreatment and criminality as maladaptive protective strategies. The same strategy can be adaptive or maladaptive, depending on the context in which it is used. Maladaptation, including the intermittent psychological shortcuts that follow danger and the pervasive maladaptation of psychiatric disorder, *depends on how well the strategy fits the context* (Perry and Sullivan, 2014). To take an extreme example, a secure strategy of open and clear communication (generally considered desirable) might be dangerous in the context of systematic genocide, where a psychopathic strategy of expecting and using falsified communication might be more protective. This extreme example highlights the value of previously learned adaptations to danger (Ellis et al., 2020). Without such prior learning, a sudden danger is likely to yield psychological trauma, that is, a gap between what one knows how to do and what safety in the situation requires. Familiarity with the strategies and how individuals can enact each strategy can help professionals identify protective and comforting behaviour patterns. Many studies describe the strategies common to various forms of mental illness, child maltreatment and criminality (Crittenden et al., 2021).

It is important to acknowledge how much we do not know about adaptation and maladaptation. Too often, the helping professions have undertaken to solve problems about which we lack basic information. We need to identify and announce what is not known yet. We also need to make the case for funding both basic and applied research and to set high standards for that research. This, we think, is the only way to help those who are not managing well on their own. With on-going research, professionals' desire to help and

Table 1. DMM protective strategies, behaviour and associated information processing.

Strategy	DMM strategy label	Behaviour	Information processing
B	*Balanced*: Unbiased with regard to logical and affective information	Open communication of thoughts and feelings, with negotiation to resolve problems and enact solutions	Integration of truly predictive cognitive and affective information
A1–2	*Inhibited/Socially Facile:* Biased toward using logical information, inhibiting affect	Splitting of positive and negative, focusing on the positive in others, avoiding disputes	Distorted cognition and omitted negative affect
A3	*Compulsive Caregiving*: Biased to show the affect and behaviour that others desire	Preference for caring for others so as to meet their needs, even at own expense	Distorted cognition and omitted negative affect; falsified positive affect
A4-	*Compulsive Performance*: Biased to used logical information to fulfil workaholic and perfectionist goals	Over-achievement, very high standards for performance, preference for challenging tasks	Distorted cognition and omitted negative affect; falsified positive affect
A4	*Compulsive Compliance*: Biased to use logical information to obey superiors	Obedience to hierarchically generated commands	Distorted cognition and omitted negative affect; falsified positive affect
A5	*Compulsive Promiscuity*: Biased to use positive appearance to engage widely	Satisfaction in social contexts without close involvement	Distorted cognition and omitted negative affect; falsified positive affect
A6	*Compulsive Self-reliance*: Biased to use logical rules to succeed without assistance	Carrying out unpleasant and painful procedures by one's self	Distorted cognition and omitted negative affect; falsified positive affect
A7	*Compulsive Idealising*: Creates absolute positive information about dangerous people or conditions	Reframing distress in terms of religious or philosophical constancies; being part of something greater than oneself	Distorted cognition; denied negative affect, delusional positive affect
A8	*Selfless*: Readily accepts others' negative perspectives about the self	Contradictory actions, based on conflict between own feelings and others' demands	Distorted cognition; denied negative affect, delusional positive affect
C1–2	*Threatening-Disarming*: Biased to use affective information to engage others	Highlighting own feelings and needs, warning of future problems	Distorted negative affect and omitted cognition
C3	*Aggressive*: Strong bias toward feelings of aggressive invulnerability to protect others	Heroic protective action during crises, often with disarmingly charming behaviour	Distorted negative affect and omitted cognition
C4	*Feigned helpless:* Strong bias toward desire for comfort	Accentuating one's vulnerability and hiding competence	Distorted negative affect and omitted cognition

(continued)

Table 1. (continued)

Strategy	DMM strategy label	Behaviour	Information processing
C5	*Punitive:* Affective bias, using astute strategic and persuasive management to protect people and administrative unit	Imagining plans and projects, enlisting support, procuring resources, and asserting hierarchical authority to meet group goals	Distorted negative affect; omitted true cognition and falsified cognition
C6	*Seductive:* Strong bias to eliciting involvement from others	Alternating enticing (even sexualised) with bitter resentment, to enlist appeasing behaviour from others	Distorted negative affect; omitted true cognition and falsified cognition
C7	*Menacing*: Strong aggressive stance against many possible enemies	Secretive plotting of aggression against presumed threats	Distorted negative affect; denied true cognition and delusional cognition
C8	*Paranoid:* Strong bias to display fear and hide anger	Suspecting everyone, seeking to control of inexplicit dangers	Distorted negative affect; denied true cognition and delusional cognition
A/C	*Combinations of strategies*: Combinations of A1-8 and C1-8	Varied combinations of the A and C behaviours above	Various combinations of the transformations above

DMM: Dynamic-Maturational Model of Attachment and Adaptation.

an understanding that vulnerable people seek to protect themselves and their children, we can expect to reduce rates of psychological distress in all its forms.

2. Part 2: A 21st century plan for improving treatment and treatment systems

Helping people feel safe and enjoy their relationships is one of the most satisfying jobs there is and yet dissatisfaction and burnout are rife in the mental health professions (O'Connor et al., 2018). The DMM addresses this by integrating treatment theories to yield a more robust and empirical model that connects bodies of existing information and suggests testable hypotheses. The benefits are greater clarity across scientific domains, a new perspective on causal conditions and, potentially, more effective interventions, with fewer iatrogenic problems.

Although the mental health, child protection and forensic criminal justice systems have grown tremendously in recent decades, the proportion of the population receiving such services continues to grow (Children's Bureau, 2018; Edwards, 2019; Olfson et al., 2019). Kim et al. (2017) estimate that 37.4% of all US children experience a child-protective services investigation by age 18 years. Moreover, staff growth continues even though crime rates are falling (Federal Bureau of Investigation, 2020); the US Bureau of Labor Statistics (2019) projects a 14% *job growth* in criminal justice. This growth suggests that

our services might themselves be misdirected and using outdated and incomplete models of the problems they seek to ameliorate. If so, that might further contribute to inequities across these systems (Edwards, 2019). We think that a shared and comprehensive theory of adaptation and maladaptation, combined with integrative theory–based services, might prevent the projected increases in troubled people and provide more effective service to vulnerable populations. Put another way, we think that understanding the developmental and psychological processes that underlay maladaptive behaviour can lead to hope for the future safety and adaptation of vulnerable people and their families.

Below we offer five applications of the DMM to the treatment of maladaptive behaviour. Some are ready for implementation, whereas others require pilot studies of feasibility, utility and cost. Others require basic research and significant changes in policy or both. The five applications are (1) a treatment-focused classificatory process of DMM protective strategies, organised as family functional formulations, to guide treatment choices, (2) a single portal to service, leading to comprehensive specialised assessment, (3) integrated transdisciplinary training, followed by specialisation, (4) customised DMM Integrative Treatment to reduce maladaptive behaviour, (5) departments of human adaptation to replace discipline-defined departments and finally, for all applications, ongoing theory-based[2] research to undergird and modify applications.

2.1. Functional formulations to guide treatment planning

Psychiatric diagnoses have provided an almost universal basis for establishing eligibility for mental health services for half a century. They also have three notable limitations. First, they do not reflect discrete disease entities (Kendell and Jablensky, 2003). Second, they do not address conditions between adaptation and diagnosable disorder, for example, the conditions associated with chronic poverty (Wakefield, 2015). Third, they have not lived up to the expectation that they would lead to effective treatments (Khoury et al., 2014). By focusing on dysfunction and defining it contextually, with the context including families of origin and adult reproductive families, DMM functional formulations address both root causes and maintaining processes. DMM formulations can lead to divergent and occasionally counter-intuitive hypotheses. The most far-reaching is one shared by several treatment theories: that the presenting problem is often not the 'real' problem. Instead, the referred person distorts the presenting problem to what they and their family can acknowledge. The clinical task becomes revealing the 'unspeakable' problem in compassionate ways at a pace that the focal person and their family members can accept (Dallos et al., 2019, 2020). Based on DMM theory, seeking unspeakable problems becomes a task focused on past and current exposure to danger and reproductive opportunity, as discovered through transformations of information. This complex task suggests the need for subtle assessments that reveal transformations.

2.2. Unified intake and assessment

Some people seek services through whatever portal seems appropriate and available to them. Others are referred to mental health professionals by physicians who find no physiological problem for the presenting complaint. Child welfare professionals serve

parents who mistreat their children. The criminal justice system focuses on those who harm others. This fragmented process is both haphazard and also reflects systemic biases. Middle-class families usually find mental health services for themselves, whereas child protection and the police identify low-income families. Further, treatment approaches (e.g. pharmacological for psychiatry, a 'brand' of psychotherapy for clinical psychologists, etc.) are tied more to the intake portal than to recipients' needs. We think a single intake portal that included a layered assessment process could better direct people to appropriate services.

Four issues are central to a single portal: (1) assessing the danger and protecting endangered people, (2) assessing critical aspects of problems, (3) providing support for individuals and families and (4) carrying out assessment economically. Some situations might require protection *before* conducting a further assessment: child maltreatment, bullying, self-harm, suicide potential, partner violence and violent criminality. Once the danger is under control, assessment of the problem is needed. The least expensive assessments are symptom checklists, but they have low validity (Brittain et al., 2013) and do not usually address familial or relationship issues. We recommend combining checklist items to include all family members and gathering and evaluating information developmentally using a chronology that connects events and symptoms temporally. Symptom checklists, combined with lifespan adverse events, denoted by the age of onset and chronicity, could serve as an efficient screening process for each family member. Based on these, some individuals and families could proceed directly to inexpensive generic services, such as parent education or stress reduction techniques.

Other people have more severe and less transparent problems, for example, biochemical dysfunction, excessive immune system activation and interpersonal and intrapersonal conflicts. Because assessment can seem threatening and is often impersonal, therapists should ask people if they would like to have a guide through this process. Because this professional's function is to aid people to manage uncertainty and complexity, family members – and not the team of professionals – should select their representative.

Specialist assessors would use various medical and psychological tools for peering below the surface of presenting problems. Many such assessments (e.g. brain imaging and Adult Attachment Interview) are cumbersome and require skilled pattern recognition and analysis; this can tempt clinicians to interpret them without certification. Research should seek more streamlined approaches that yield equal or greater information. The culmination of the assessment process would be a multidisciplinary committee that would produce a *family functional formulation* and *treatment plan*. Family functional formulations address obscure origins of dysfunction, multiple problems in one individual and multiple family members with problems. The plan should be organised in individuals' changing ZPDs and include as few professionals as possible (Crittenden, 1992). A central point is to include the family context at all points of assessment.

Piloting this approach could demonstrate improved quality of treatment. Some documented projects already exist that show the effectiveness and cost benefits of separating initial assessment and treatment (e.g. Robson et al., 2015; Svanberg et al., 2010). Additional focused pilot studies would be a reasonable next step.

2.3. Integrated trans-disciplinary training, followed by advanced specialisation

We propose that people who wish to work in mental health treatment, child protection and criminality participate in trans-disciplinary, basic training and then develop expertise in their professional speciality. This approach would include all of the separate disciplines that now deliver mental health services: psychiatry, clinical psychology, developmental psychology, social work, occupational therapy, counselling, child protection, police, corrections personnel and so forth. Before choosing a specialisation, they would receive in-depth training in human development and adaptation, including its evolutionary functions and cultural variations.[3] Each trainee would have an extensive rotation through various types of assessment and treatment; this would give them an informed appreciation of the range of domains and skills necessary to assist vulnerable people and their families. Rotations would include experiencing social/cultural conditions in family homes and neighbourhoods, assessing individual development, biological systems (including neurology, immunology and biochemistry) and evaluating overall family functioning. Finally, a self-awareness program for future mental health professionals would include having an Adult Attachment Interview delivered to them and jointly interpreted with a mentor early in training, before selecting a specialisation.

We propose increasing the types of specialisations offered. For comparison, a person with a *physical* illness first sees a generalist who refers to a diagnostic technician whose diagnostic evidence is read and interpreted by a specialist who makes recommendations to the generalist who either provides the treatment or refers to a treatment specialist. *Psychological* dysfunction has no equivalent layering of expertise, but perhaps it should. We suggest six types of specialisation:

1. *Screening* for immediate response or further assessment. Learning to screen usually takes a few hours' training and can be accomplished by almost all professionals or by intake specialists.
2. *Administering specialised assessments*, including DMM relationship assessments, neuroimaging and biochemical assessments. Each assessment would have its own certified assessment technicians. Psychotherapists could administer the DMM assessments, with appropriate training and certification.
3. *Interpreting the assessments.* Interpretation is a separate speciality from administering assessments. Interpretation takes substantial training and certification of accuracy. Psychotherapists do not usually have time to master interpretation, and it would be inappropriate to interpret the assessments of people they know.
4. *Formulating* the problem using all of the assessments and family history. The formulation requires knowledge about all the assessments, considerable guided practice and contributions from several professionals.
5. *Designing customised treatment plans* that fit each person's ZPD. Customised treatment plans require that psychotherapists have expertise in human development and an understanding of treatment options (Peterson, 2020). They are based on the idea that ready-made solutions cannot fit the precise needs of not yet

identified people and that the most effective solutions are those designed with input from the people experiencing the problem.

6. *Delivering customised treatment.* Practitioners of DMM Integrative Treatment should have training in psychotherapy principles and experience delivering a wide range of treatments.

Group programmes, short service periods and limited academic training of service providers have become increasingly common in order to hold down costs. We think that the complexity of mental health, child protection and criminality require the most specialised training and assessment-based allocation of resources. This will both improve treatment efficacy and also reduce the costs of delivering non-beneficial services and of people re-entering the system multiple times. Treatment focused on information processing about protective strategies and delivered by skilled professionals can be expected to both save money and improve the quality of individual lives.

2.4. Customised DMM Integrative Treatment

DMM Integrative Treatment organises the best ideas from all treatment approaches to enable people to live safer, happier lives. Rather than having branded DMM techniques or programmes, DMM Integrative Treatment is a set of principles for matching existing techniques to specified goals. For example, psychoanalytic 'defence mechanisms' are set in a developmental context of information processing as protective transformations of information. Cognitive therapies highlight the psychological processes that underlie maladaptive behaviour and emphasise approaches to changing these. Family therapies address family conditions that generate and maintain maladaptive strategies. Notably, in DMM Integrative Treatment, families are always part of treatment, whether they are present physically or only in the minds of the people receiving and offering treatment.

DMM Integrative Treatment is a *process* that begins with the assessment of danger and formulation of the protective strategies and developmental processes used to cope with danger. Once a plan is constructed, treatment moves forwards step by shared step until resilience becomes a habit of mind, a way of being. Below we offer some principles for this step-by-step process.

2.4.1. Customising mental health treatment. DMM Integrative Treatment reduces competition between treatment theories and, by focusing on the basics of protection, comfort and reproduction, offers a way to match the strengths of existing therapies to families' problems and the skills of professionals. The basic idea is that science is cumulative and dynamic rather than exclusionary and static. Four decades of published clinical cases, group descriptive studies and comparative studies have yielded general functional formulations for many symptom presentations and guidelines for generating family functional formulations for each specific family. Crittenden et al. (2021) provide synopses of this work for many mental health, child protection and forensic problems. Notably, the treatment plans included innovative customised services to meet individual needs, rather than limiting the plans to existing services. The point of this research is to provide a broad picture of familiar problems while, at the same time, focusing on the individual differences that make each person and

family – and their treatment needs – unique. The process customises both assessment and intervention (McEwen and Getz, 2013) around the goals of adaptation to the present and preparation to adapt to the not-yet-known future.

2.4.2. Therapists functioning as transitional attachment figures. We conceive of therapists as transitional attachment figures functioning to guide family members from a state of unawareness and maladaptation to one of being able to regulate, relatively well, their contributions to their relationships. Rather than thinking of therapists as secure bases, we conceive of change as inherently threatening. Consequently, therapy becomes a process through which individuals try new ways of thinking and acting in their ZPDs until they become comfortable and the therapy feels safe. At that point, the therapy can conclude.

2.4.3. Treat information processing. Therapists select treatment actions based on the functional formulation (1) beginning with danger in the present[4] and the past, (2) including the interplay of family strategies in response to danger and, (3) providing information about formerly adaptive transformations of information that might render current behaviour maladaptive. Narrative approaches to treatment can be beneficial because they help family members discover their strengths, identify gaps and misunderstanding in their recall (i.e. transformations of information) and construct alternative narratives from other perspectives or with more advantageous conclusions that could guide future behaviour (Dallos and Vetere, 2014). However, therapists should not rush to create coherent narratives; incoherence and silence can be pregnant states leading people to discover new ways to tell their own stories.

2.4.4. Acting in the ever-changing ZPD. At any given moment, the therapy should address ZPDs, the 'place' where each family member is ready to change. Quick solutions to easy problems can win trust from family members, thus paving the way to approaching more difficult problems and accepting the therapist as a trusted guide. Acknowledging family members' distress and asking them to wait for relief shows empathy while giving them agency in regulating their feelings. Helping family members to discover how astute and adaptive their solutions were *in their developmental context* supports self-esteem and can reduce depression by emphasising agency. The professionals' contribution is regulating the pace of the process and enhancing family members' awareness of changes. The goal is to update past solutions to become currently appropriate solutions, moving from success to success, not only in resolving aspects of the problem but also clarifying *how* the problems were resolved. This, in turn, is the basis of resilience in the face of future problems.

2.4.5. Using reciprocity and feedback. DMM Integrative Treatment presumes that feedback within and across sessions will restructure the treatment plan and the therapeutic tools to be used. 'Resistance' is treated as *valuable information* about the poor fit of the treatment to the situation. In the DMM, treatment is a reciprocal, progressive and recursive process. It starts with individuals' information, moves through input from professionals and concludes with the individuals' decisions and changes. Mistakes become the basis for

exploring how to recover and repair breaches in relationships. This process is therapy, but of course, it is also life.

2.5. Departments of human adaptation

The shift towards addressing psychological processing of information about danger highlights the similarities of mental health, child protection and criminal systems. A common process underlies all three treatment systems: strategies to protect oneself and one's family from danger, leading to diverse mental health, child protection and criminal outcomes. Not only were most maltreating parents and criminals maltreated as children (Bowlby, 1944; Spinetta and Rigler, 1972; Weeks and Widom, 1998), but their children are at risk for all three conditions (Herrenkohl et al., 2020; Lippard and Nemeroff, 2020). All three conditions reflect danger to life itself (Ertl et al., 2019) and, when they occur in childhood, to accurate and complete information about danger in the future. Misguided self-protection or conflict between self-protection, child-protection and partner-protection are the behaviours that concern professionals (Crittenden, 2016; Ertl et al., 2019). From this perspective, the interconnections across generations in protective strategies and the information processing stand out as needing change.

Treatment systems currently focus primarily on changing behaviour, not the strategic use of relationships nor information processing about danger. Even when psychotherapy is directed to families or psychological processes, it lacks attention to danger and DRs based on psychological shortcuts. Child protection and forensic services focus on maladaptive and illegal behaviour rather than on the DRs that generated the behaviour. Because child protection and criminal processes threaten the investigated persons, investigated people are likely to use maladaptive self-protective DRs and be labelled resistant, uncooperative, non-compliant or combative. Treatment systems can correct these limitations in our understanding of the roots and elicitors of dangerous behaviour by applying more information from the dynamic interactive influences on human survival and adaptation (see Figure 1).

The most obvious need is to create unity where there is division by bringing these three service structures together as one 'department of human adaptation'. This would eliminate the artificial division between child and adult services while uniting the expertise from many disciplines in a truly integrative manner for each case that comes to attention. The most immediate effect would be to highlight differences in problem definitions and knowledge gaps. Discrepancy is the starting point for generating more complete understanding; working groups of policymakers from different disciplines can lay the groundwork for a new and unified understanding of problems, better coordinated services and, ultimately, unified services, particularly preventive services. Gaps in knowledge can suggest new research priorities, with a corresponding shift in funding priorities, beginning with funds for groups to conduct pilot programs. Notably, basic science has already moved to prioritise multidisciplinary research (National Science Foundation, n.d.). It might be time for service delivery to do the same.

The outcome would be unified 'departments of human adaptation' whose members understood maladaptive behaviour as reflecting a developmental series of psychological shortcuts leading to misperceived need for protection. These restructured 'departments of

human adaptation' would focus on refining our understanding of the role of danger on staying alive (now and in future generations) and feeling safe. They would gather *all* the therapeutic tools of *all* the disciplines to *coordinate* their application to prevent and treat distress and maladaptation.

Of course, such an immense set of changes could not occur overnight. But could it happen at all? The speed with which psychiatric diagnoses were accepted as the standard across all disciplines (Surís et al., 2016) suggests it can. The speed at which cognitive behavioural therapy was accepted as a standard treatment suggests it can (Dalal, 2019). The speed with which child protection departments were established after Kempe et al.'s (1962) groundbreaking article on 'the battered child syndrome' (Degli Eposti et al., 2019; Myers, 2010) suggests it can. The speed at which the incarceration rate *increased* in the United States between 1973 and 2010 (National Research Council, 2014) suggests rehabilitation services could be increased just as swiftly, given new information and the political will.

The change process might include a series of steps from meetings among policymakers, meetings among multidisciplinary managers and workshops on the new perspective. Finally, if 'departments of human adaptation' are to be viable, we will need to change our political and funding systems (i.e. the influence of the context) that underlay treatment. Resources will need to move from foster care, group homes, shelters and prisons to services to troubled people to enable them to live safely in their own families, contribute to their children and grandchildren's well-being and participate in the larger community. This approach has the potential to break the vicious intergenerational cycles of mental illness, child maltreatment and criminal behaviour, replacing them with generation-to-generation progress.

3. Conclusion

The DMM unites the best ideas, theories and approaches to treatment. It is not another theory, but rather an integrated model of what is known and a way to move forwards as more becomes known. Its advantage is that it offers a functional structure, around the ultimate imperatives of survival and reproduction, to position theories and empirical work relative to one another. It has a place for all types of theory and findings and adjusts its structure to accommodate emerging science. Such an integrative approach is needed because no theory (1) organises all the influences on adaptation, (2) describes the full range of functioning from outstanding to adaptive, distressed, pathological and deadly (e.g. disease, injury, attack and suicide), (3) addresses survival and reproduction as developmental processes from infancy forwards and (4) itself adapts as expanding domains of inquiry contribute to knowledge about survival and reproduction. Crucially, the DMM's unified perspective on protective strategies and their potential to generate maladaptation in changed contexts can focus service managers and service providers on the helping professions' core functions: helping people stay safe and promote the development of their children.

We have offered several changes to accomplish this vision: a focus on the development of protective and reproductive strategies, new explanatory and functional classificatory systems and restructuring and integrating service delivery. Almost all of the suggested

changes have been proposed by others. Our purpose is to connect good ideas into an integrated and comprehensive whole. Notably, all levels of human functioning, from genetic to bio-organic, psychological, familial and contextual/cultural, contribute to better outcomes. This unifying perspective could produce a paradigm shift that would clarify the similarities at the root of all forms of maladaptation, increase knowledge about human adaptation and improve treatment efficacy. Possibly, we could reduce the degrees of separation among disciplines that share the same goal of helping people to solve the problem of how best to stay alive now and in future generations. Underlaying all the ideas that we have offered is a belief in the inherent capacity of all humans, especially threatened humans, to seek safer and more comfortable lives for themselves and their families.

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Notes

1. We use the terms somatic, cognitive and affective as we define them here in the text. Others use them differently, without there being generalised agreement on the best terminology.
2. Notably, the accumulation of atheoretical findings does little to move understanding forwards (van Rooij and Baggio, 2021).
3. We do not, however, suggest uniformity of such basic courses. Diversity is a human advantage both in personal strategies and in ways of preparing professionals to work in different contexts and cultures.
4. Including the danger of assessment and treatment, as perceived by many adults.

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