SOCIAL AND EMOTIONAL INTELLIGENCE: CONTRIBUTORS TO RESILIENCE AND RESOURCEFULNESS

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ABSTRACT
In this chapter we discuss social and emotional intelligence in relation to resourcefulness and resilience; constructs that are useful in explaining individual differences in the ability to face and overcome the impact of adverse or traumatic events. Although constructs of social and emotional intelligence have long been recognized as important in our understanding of social interactions, until recently, there has been little research interest in systematic investigation that will link these constructs to resilience and resourcefulness. We briefly review the definitions and discuss how social and emotional intelligence contribute to the person’s resilience and resourcefulness and assist in adaptive functioning and effective negotiation of the social as well as personal world in the face of challenging psychosocial, environmental, and societal conditions. Understanding of the rules of social exchange and of who we are in relation to other people are critical for gaining social support and cooperation that allows us to achieve our goals and makes our life meaningful and manageable. We draw on research on responses to trauma and posttraumatic conditions with additional references to clinical conditions characterized by impairments in abilities associated with social and emotional intelligence such as personality disorders, autism and acquired brain injury. We also briefly discuss approaches to the measurement of social and emotional intelligence and psychometric instruments that can be used in applied settings. We report promising results from our studies of the utility of a paper and pencil measure of social intelligence (Social Intelligence Test-Revised) for neuropsychological evaluation of traumatic brain injury. The test refers to practical applications of executive functioning to explicitly social information, i.e., the ability to engage effectively in social perception and social problem solving, and our findings indicate that it is sensitive to the severity of traumatic brain injury.

Key Words: Social Intelligence, Emotional Intelligence, Resilience, Resourcefulness, Adaptability

INTRODUCTION

Concepts of resilience and resourcefulness

This volume deals with the subject of resilience and resourcefulness, constructs that are useful in explaining individual differences in the ability to face and overcome the impact of adverse and traumatic events.

The detailed discussion of the two concepts is covered elsewhere in this volume. In this chapter we will understand resilience as cognitive and emotional mechanisms that act as a protective shield that mediates (lessens) the impact of adverse or traumatic events and prevents disorganization and disintegration of the self (Freud, 1920, 1961; Celinski & Pilowsky, 2008). Resourcefulness, on the other hand, refers to the ability to access and employ internal and external
resources to deal with the impact of the adverse or traumatic event (after being psychologically affected by it) and as such is linked with the concept of recovery in the literature on posttraumatic conditions (Celinski & Gow, 2005).

What makes one individual fall apart in the face of adversity while other is minimally affected, or if affected, is able to recover? A number of pre-traumatic personal characteristics as well as environmental factors have been proposed to account for individual differences in response to adversity and trauma. These include personality and copying styles, religious/spiritual beliefs, personal values, locus of control, attributional style/cognitive schemas, social support, family instability (for recent review of studies see Celinsky and Pilowsky, 2008). The relative significance of these factors will likely depend on the nature of the event (natural disasters, military combat, sexual assault, motor vehicle accident, etc.) and the severity of the trauma and associated loss.

In this paper, we would like to propose that social and emotional intelligence are important for effective adaptability in general and for effective dealing with adversity and trauma in particular.

SOCIAL AND EMOTIONAL INTELLIGENCE

Constructs of social and emotional intelligence

While constructs of social and emotional intelligence have been long recognized as important in understanding individual differences, and the qualities subsumed by those constructs are easily recognized in many facets of life, there are significant definitional problems and difficulties in empirically differentiating social (and emotional) intelligence from related constructs (Kihlstorm and Cantor, 2000; Silvera, Martinussen & Dahl, 2001). Over the years, different definitions of social intelligence have been put forward, each emphasizing different components of what is now clearly understood as a multifaceted construct. Thus, some researchers stress either the cognitive aspects, i.e., the ability to understand social situations or knowledge of social rules or the behavioral/performance component, i.e., the ability to deal effectively with other people, many take a more comprehensive approach that includes several aspects of social intelligence such as social insight, perception, and knowledge, perspective taking, and ability to interact successfully with other people (Jones & Day, 1997; Kosmitzki & John, 1993; Silvera, Martinussen & Dahl, 2001; Wong, Day, Maxwell & Mera, 1995).

The concept closely related to social intelligence is emotional intelligence but the relationship between these two constructs remains unclear. Originally, emotional intelligence, defined as the ability to discriminate, monitor and manage feelings in oneself and others and to use that knowledge to solve problems, was viewed as part of social intelligence (Greenspan, 1989; Salovey & Mayer, 1990). In his well known book, Emotional Intelligence, Goleman (1995) identified emotional intelligence as a distinct construct. Gardner (1993) attempted to combine the two constructs in his conceptualization of personal intelligences and referred to intrapersonal (emotional) intelligence defined as knowledge of one’s internal world and interpersonal (social) intelligence defined as the ability to determine other people’s emotions and intentions.

The most recent theories stress the interconnectedness of the two constructs (Bar-On & Parker, 2000; Goleman, 2006). Bar-On (2000, 2006) argues for a single construct of emotional-social intelligence (ESI) that is composed of a number of “interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands” (Bar-On, 2006, p.3). Among these, he identified five main domains: self-awareness and self-expression, social
awareness and interpersonal relationship, emotional management and regulation, change
intelligence that explicitly encompasses emotional intelligence. In this model, abilities that are
subsumed under social intelligence fall into two broad categories: social awareness and social
facility. Social awareness refers to a spectrum that runs from instantaneously sensing another
person’s inner state, to understanding their feelings and thoughts, to comprehending complicated
social situations and includes primary empathy, attunement, empathic accuracy and social
cognition. Social facility builds on social awareness to allow smooth effective interactions and
includes synchrony (interacting smoothly at the nonverbal level), self presentation, influence and
concern (caring about others’ needs and acting accordingly).

Looking at the abilities that are encompassed by the various definitions of social and emotional
intelligence, we can appreciate how they can contribute to a person’s resilience and
resourcefulness. Whether seen as interrelated abilities or different components of the same
construct, they clearly combine to facilitate adaptive functioning and effective negotiation of the
personal as well as social world and equip a person to face the challenging psychosocial,
environmental and societal conditions that are part of life. They guide how to express and manage
emotions in ways that do not damage or destroy relationships or lead to self-destructive
behaviours; how to implement one’s goals and persist in face of frustration and adversity, and
how to cope in ways that are flexible and promote personal growth and development. And when
confronted with a life altering situation, how to find an inner strength through faith, religion,
personal values and/or commitments to face the challenge.

The understanding of the rules of social exchange and of who we are in relation to other people
is critical for gaining social support and cooperation that allows us to achieve our goals and makes
our life meaningful and manageable. The positive presence of other people in our life, and the
support that they offer as well as a sense of connectedness and belonging have long been
recognized as an important protective and curative factor in mental health research. For instance,
literature on resilience in children and adolescence indicates that social connectedness is one of
the main factors in the reduction of suicidal thoughts and behaviours (Resnick, Harris & Blum,
1993) and problematic substance abuse (Hawkins, Catalano & Miller, 1992; Resnick, Harris &
Blum, 1997) in young people. Similarly, resilient children with low IQ who grew up to achieve
the same income levels and had children as well educated as high IQ group were more likely to
enjoy warm objects relations, to be generative, and to use mature defenses (Vaillant & Davis,
2000). In a recent study, Friborg, Barlaug, Martinussen, Rosenvinge & Hjemdal (2005) found a
relationship between measures of resilience and social intelligence in a group of applicants for the
military college.

In summary, social and emotional intelligence relate to the ability to “effectively manage
personal, social and environmental change by realistically and flexibly coping with the immediate
situation, solving problems and making decisions. To do this, we need to manage emotions so that
they work for us and not against us and we need to be sufficiently optimistic, positive and self-
motivated” (Bar-On, 2006, p.4).

Implications of impairment of social and emotional intelligence:
Linking constructs to clinical conditions

To appreciate the significance of social and emotional intelligence for effective adaptation in a
world that is by nature social and interpersonal we can look into conditions in which these
abilities become impaired either during the developmental period such as autism or intellectual
disability, or characterological (personality) disorders, or later in life, as a result of an illness or injury to the brain.

Impairment in social interactions and ability to relate to other people is the defining characteristic of autism spectrum disorders (ASD; DSM-IV-TR, 2000). These neurodevelopmental disorders are probably the most evident example of how disabling and incapacitating social deficits can be even in the presence of normal or above normal intellectual abilities such as is the case in Asperger Disorder (DSM-IV-TR, 2000). In effect, these deficits not only make it difficult for a person with ASD to understand, appreciate and navigate the complexities of human interactions that in turn constitute a source of considerable stress and frustration, but they also prevent a person from using the connection with other people for practical and emotional support, guidance and coping. This is further compounded by difficulties with understanding one’s own and other people’s emotional states and problems with communication. Not surprisingly, behavioural disturbance in a form of self-injurious behaviours, aggression or severe temper tantrums is not uncommon in individuals with ASD, and they are at a significant risk of developing mental health problems, particularly anxiety and depression (Howlin, 2004).

Personality disorders give us also an insight into how critical the intrapersonal and interpersonal competencies are for personal well being and successful negotiation of the social world (DSM-IV-TR, 2000). Inability to assert ones needs and regulate and modulate emotions particularly in relation to other people may result in significant dysfunction or complete break down of significant relations (as often seen in borderline personality disorder; Kernberg, 1985). Deficits in social and emotional reciprocity (as seen in narcissistic and antisocial personality disorders) may lead to behaviours or actions that are clearly asocial, disregard the wellbeing of others, or are even criminal (Blair, Colledge, Murray, & Mitchell, 2001; Goleman, 2006).

Psychosocial problems and difficulties with social integration following traumatic brain injuries (TBI) provide us with another example of how important social awareness and competence are for effective posttraumatic adjustment. Deficits in social competence in patients with TBI were associated with dependence of institutional and personal care, and decreased quality of life and sense of well-being (McGann, Werven & Douglas, 1997). Warshchausky, Cohen, Parker, Levendoosky & Okun (1997) reported that children with TBI were impaired in social problems solving as they generated fewer total solutions on the social problem solving measures. Spiers, Pouk & Santoro (1994) found that the head injured subjects were unable to take the perspective of the prototypical others and instead they used themselves as a reference point which reflects an egocentric thought, the over-evaluation of ability and poor flexibility in problem solving.

**MEASUREMENT**

“Social intelligence shows itself abundantly in the nursery, on the playground, in barracks and factories and salesrooms, but it eludes the formal standardized conditions of the testing laboratory” (Thorndike, 1920, p.231). Measurement of social intelligence particularly in applied/clinical settings continues to be challenging as there are very few measures available. The existing instruments that purport to assess social intelligence (or aspects of social intelligence such as social perception, social problem solving, emotion recognition, or mentalizing ability) include paper and pencil performance measures, self-report measures and experimental/observational tasks. Some of the recently developed, or revised, research instruments are described below.
The Tromso Social Intelligence Scale (TSIS; Silvera, Martinussen & Dahl, 2001) is a 21-item self-report measure of social intelligence with three factor structure: social information processing, social skills, and social awareness. Respondents rate on a Likert scale the degree to which each statement describes them (e.g., “I fit in easily in social situations”). The scale is very brief, takes little time to complete and is easy to administer but, as a self-report measure, it is open to potentially significant bias towards socially desirable responding. The scale has been used as a research instrument in a number of European studies results of which suggest acceptable psychometric properties (Friborg, Barlaug, Martinussed, Rosenvinge & Hjemdal, 2005; Gianluca, 2006; Vasilova & Baumgartner, 2005).

The Awareness of Social Inference Test (TASIT; McDonald, Flanangan & Rollins, 2002) was developed to assess emotion recognition, theory of mind (ToM) judgments, and social inference making as they occur in everyday settings. The test utilizes videotaped conversational exchanges and the subject is asked to judge the speakers’ emotions, the speakers’ beliefs (first-order theory of mind), what speakers intended their conversational partners to believe (second-order theory of mind) and what they meant by remarks that were sincere or literally untrue (a lie or sarcastic retort). Since this is a performance-based test, it could be particularly valuable in assessing clinically compromised populations such as individuals with a suspected head injury, learning disability or autism spectrum disorder. The test is commercially available.

The Social Intelligence Test-Revised (SIT-R: Celinski, Salmon & Allen, 2005) is a re-standardized and altered version of Moss, Hunt, Omwake & Woodward, 1949 Social Intelligence Scale. The SIT-R is a paper and pencil measure with four subtests which assess problem-solving in social situations, attributing emotions and motives to people’s behaviour, understanding social rules, and applying a sense of humour by finding the most humorous ending for jokes (See Appendix A for item sample). The SIT-R was recently revised with regard to item content and re-normed on student and brain-injured populations (Celinski, Salmon, Allen III, Palucka & Antczak, 2006; Palucka, Celinski, Allen III, Salmon, Spik, Dobrzynski & Shermer, 2007); the findings from these studies will be presented in the section below.

There is also a growing number of measures of emotional intelligence, particularly those developed by proponents of specific models, that also encompass some aspects of social intelligence/competence.

Bar-On (1997) developed an Emotion Quotient Inventory (EQ-i) which is a measure of emotionally and socially competent behaviour that is a reflection of emotional and social intelligence. The EQ-i is a 133-item self-rating scale that assesses emotional-social competencies and skills in five main areas: Intrapersonal (comprising self-regard, emotional self-awareness, assertiveness, independence, and self-actualization), Interpersonal (comprising empathy, social responsibility, and interpersonal relationship), Stress Management (comprising stress tolerance, and impulse control), Adaptability (comprising reality testing, flexibility, and problem solving) and General Mood (comprising optimism and happiness). As a self-report measure the EQ-i is open to bias and has been found susceptible to socially desirable responding (Day & Carroll, 2008).

Mayer-Salovey-Caruso’s Emotional Intelligence Test (MSCEIT; Mayer, Salovey & Caruso, 2002) is modeled on ability based IQ tests and assesses four aspects of emotional intelligence: perceiving, using, understanding and managing emotions through 141 emotion-based problem-solving items (e.g., “Indicate how much of each emotions is present in this picture: happiness, fear, sadness, surprise”). Central to the model is the notion that Emotional Intelligence requires attunement to social norm and the test is scored in the consensus fashion. This means that unlike typical ability tests, the items do not have objectively correct responses; instead, an individual’s
answers are compared to the answers of a broad sample of respondents; a higher score indicates a higher overlap between the answers of the individual and the normative sample. The test can also be expert-scored in which case an individual’s answers are compared to those of a group of emotion researchers. The test has been criticized as an ability measure on the grounds that consensus scoring approach, by definition, does not allow for creating items that can only be solved by a small group of respondents as is the case in ability tests. The test is available commercially in a paper and pencil form or on-line and has been widely used particularly in business and academic settings, however, issues have been raised with regard to several test items (Follesdal & Haqtvet, 2009).

The Emotional and Social Competency Inventory (ESCI) (Boyatzis, 2007) is based on the Goleman’s model of emotional competencies and is an extension of the earlier measure, the Emotional Competency Inventory (1999). The ESCI assesses 12 emotional and social competencies organized into 4 clusters: self-awareness (emotional self-awareness), self-management (achievement orientation, adaptability, emotional self-control, positive outlook), social awareness (empathy, organizational awareness) and relationship management (conflict management, coach & mentor, influence, inspirational leadership, teamwork). The ESCI is a 360 format tool that is used for assessment in organizations and provides individuals with feedback from several sources (e.g., manager, direct reports, peers). The ESCI requires formal training and accreditation for use from the test developer (Hay Group).

Other measures

Experimental /observation approaches are most common type of measures in developmental or clinical-developmental research. The exploding interest in autism spectrum conditions has led to a development of research paradigms that focus on specific areas of impairments such as joint attention, theory of mind tasks, emotion recognition (Baron-Cohen, Leslie & Frith, 1985; Blakemore & Frith, 2003; Happe, 1994; Muris, et al., 1999; Ross, McDuffie, Weisman & Gernsbacher, 2008) and more recently, these include video-based tests (Movie for the Assessment of Social Cognition; Dziobek et al, 2006; The Reading the Mind in Films Task; Golan, Baron-Cohen, Hill & Golan, 2006). Two complementary instruments have been developed specifically for the assessment of deficits in social interaction and communication, including social-emotional reciprocity, for clinical/diagnostic purposes: one involves direct observation (Autism Diagnostic Observation Schedule; Lord et al, 2000), the other a structured interview with caregivers (Autism Diagnostic Interview-Revised; Lord, Rutter & LeCouteur, 1994). For the purpose of planning intervention, some of the proposed assessment approaches are so extensive and multifaceted (including direct observations with peers and in different environmental contexts, standardized measures, battery of informal assessment tools, interviews with teachers and parents, diagnosticians interacting with student) (Winners, 2002) that they would be practically impossible outside of highly specialized settings.

Recent studies

What is the research evidence that the constructs of social and emotional intelligence are useful for our understanding of individual differences in adaptability and successful coping with life’s demands, challenges and pressures?

There is a general revival of interest in this area which comes particularly strongly from the current research on autism spectrum disorders and new methodologies for investigating social and
emotional deficits (as discussed above). However, because of the definitional and measurement issues discussed earlier (lack of agreed upon definition of social intelligence, multifacet nature of the construct, measures either time consuming and difficult to administer or, conversely, assessing only a very specific aspect of the construct), research on social and emotional competence in applied and clinical settings is still limited.

It is recognized that psychosocial adjustment and community re-integration following a traumatic brain injury (TBI) is a primary task (McGann, Werven & Douglas, 1997) as well as a major challenge in post-traumatic rehabilitation (Morton & Wehman, 1995). Limited studies on social adaptability after TBI indicate significant impairments in social competence. MacDonald, Flanagan, Rollins & Kinch (2003) found that subjects with TBI were poorer at judging emotions, had problems recognizing neutral items, fear, disgust and sarcasm, but had no problem with understanding sincere statements. In another study, McDonald & Flanagan (2004) demonstrated deficits in social perception (emotion recognition, mentalizing ability and social communication) after severe TBI; most specifically they found that the participants had marked difficulty judging most facets of social information and could recognize speaker’s beliefs only when this information was explicitly provided. A recent study (Turkstra, Williams, Tonks & Frampton, 2008) found that adolescents with TBI are likely to have impairments in emotion recognition and mental state attributions that might not be identified on standardized tests and which have implications for social interactions and development and maintenance of personal relationships in a very important developmental period.

We have recently obtained promising results using the Social Intelligence Scale-Revised (1949) and its recent revision, the Social Intelligence Test-Revised (2005), for a neuropsychological evaluation of traumatic brain injury. The test refers to practical applications of executive functioning to explicitly formulated social information, i.e., the ability to engage effectively in social perception and social problem solving. Our results indicate that the test is sensitive to the severity of traumatic brain injury.

In the first study (Celinski et al., 2004), a group of 98 workers with a head injury sustained in an industrial accident underwent neuropsychological assessment which also included the Social Intelligence Scale (the 1949 version was used in this study following recent re-standardization). The workers were split into two groups based on the severity of the brain injury that was defined in terms of the reported length of post-traumatic amnesia (PTA); PTA up to 3 hours (n=48) and PTA greater than 3 hrs (n=50). The groups were balanced with respect to age and education. The findings indicate that the SIS alone was a good predictor of membership in relative severity groups (more than 66% accuracy was achieved). Adding selected subtests from the WAIS-R (Comprehension and Similarities) and the Category Test score increased the prediction of accuracy of membership in the groups to only 78% (Table 1 & 2). These results suggest that the SIS might be a useful tool both from the diagnostic perspective and for assessment of social adaptability.

Table 1

| Table 2 |

A subsequent study (Celinski, Salmon, Allen III, Palucka & Antczak, 2006) compared responses of the same group of patients and two groups of psychology students from Canada and US. In each subscale as well as the total test, the correlations between the two groups of students were higher than between the students and patients, thus the test allowed for differentiation between the normative sample and the brain injured group.
The third study (Palucka, Celinski, Allen III, Salmon, Spik, Dobrzynski & Shermer, 2007) was conducted to establish the reliability for the recently revised and modified version of the SIT-R (2005) and to obtain normative data. While the overall test reliability was less than expected (Cronbach alfa coefficient of 0.57); the reliability of each individual subtest was satisfactory (Cronbach alfa coefficients ranging from 0.66 to 0.79). In this study, the responses on the SIT-R were compared for psychology students, injured workers without a head injury, and two new groups of patients with Posttraumatic Amnesia. The PTA criterion for severity of brain injury in this study was more sensitive than in the first study as the groups were based on PTA less or more than 30 seconds. The results (Table 3) indicate increased sensitivity and specificity of the updated SIT-R subtests with the overall prediction rate of 83%. In addition, the findings indicate that the SIT-R allows for assessment of different aspects of social competency using individual subtests. The study found no difference between the students and injured workers without a head injury suggesting that either group can be used as a normative purpose.

Table 3

CONCLUSION

In this chapter we discussed the usefulness of the constructs of social and emotional intelligence for our understanding of individual differences with regard to the ability to respond effectively and adapt to life challenges. In its very essence, the concept of social intelligence is arguably distinct from cognitive and emotional intelligence (although it is often regarded as closely related to the latter). It reflects an intuitive social awareness that helps determine the right or most effective way of responding to a given social situation which represents integration with personal needs and personal agenda. Social intelligence underlines a broad spectrum of human activities, such as the ability to function in a social group, secure social advancement, enjoy work satisfaction, or enter and maintain an intimate relationship or friendship.

Despite the renewed interest in social (and emotional) intelligence, and its significance for effective functioning, sense of agency and psychological health, deficits in social intelligence constitute the aspect of psychopathology that is not always considered because there is no adequate methodology to assess all clinical aspects that could be potentially applicable. There is a particular need for psychometrically sound measures that can be used in applied, clinical and rehabilitative settings.

We presented promising findings from our research with the Social Intelligence Test-Revised which indicate the usefulness of the measure for neuropsychological evaluation of traumatic brain injury. The measure is easy to use and is quite unique in its inclusion of humour that requires attunement to subtleness. Certainly, more research is needed with different normative and clinical populations.

REFERENCES

Boyatzis, R.E. (2007). The creation of the Emotional and Social Competency Inventory (ESCI) Findings from a pilot study to achieve a higher psychometric standard with the ECI. Hay Group.


Table 1: Contingency Table: Head Injury Severity by Predicted Head Injury Severity

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Correct predictions based on the Overall measures model (36.67% + 30% = 66.67%) Correct predictions based on three SIS subscales, WAIS-R Comprehension and Similarities and the Category Test (32.61% + 45.65% = 78.26%)
Table 2: Contingency Table: Head Injury Severity by Predicted Head Injury Severity

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Correct predictions based on three SIS subscales, WAIS-R Comprehension and Similarities and the Category Test (32.61% + 45.65% = 78.26%)
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Appendix A: Sample of items from the Social Intelligence Test-Revised (SIT-R)

Test 1: Judgment in Social Situations

*Instructions:* Four answers are suggested for each of the following questions. Make a “X” in the space in front of the answer which you consider to be most nearly correct. Do not check more than one answer.

Imagine that you have a new job with a large company. The best way to establish pleasant and friendly relations with your business associates would be:

__Avoid noticing and correcting the errors they make__
__Always speak well of them to the boss__
__Be interested and cooperative in your work__
__Ask to be allowed to do those tasks which you can do better than they can__

An acquaintance is conversing with you about his/her hobby – but you are bored. It would be best to:

__Listen with a polite but bored attention__
__Listen with feigned interest__
__Tell them frankly that the subject does not interest you__
__Look at your watch impatiently__

Test 2: Observation of Human Behaviour

*Instructions:* If the statement is true, circle T; if it is false, circle F.

T   F   One of the surest methods of bringing a person to your point of view is by engaging in argument.

T   F   All people who become wealthy or famous must be either bright or hard-working

Test 3: Sense of Humour

*Instructions:* In each of the following, place an “X” by the one of the four suggested completions that makes the best joke.

Physician while taking case history asks, “Are you married?” Patient:

__”Yes, but I pay the bills.”__
__”That was twenty years ago.”__
__”My partner chooses his/her own doctor.”__
__”No, the reason I look this way is because I’m sick.”__
Appendix A (cont’d)

Test 4: Recognition of the Mental State of the Speaker

5. Disgust 10. Regret 15. Hate

Instructions: In the number before the statements, write the number of the word from the above list which most accurately describes the mental state of the person making the statement. Some of the mental states in the list may not have a statement represented below, and some may be represented more than once.

(   ) And to think I had looked forward to this party for days!

(   ) Drink as much wine as you please but preach the benefits of pure water.