Editorial

Social communication of pain enhances protective functions:
a comment on Deyo, Prkachin and Mercer (2004)

Pain serves evolved protective functions not only by warning the suffering person, but also by impelling expressive behaviors that attract the attention of others. In turn, care-giving reactions would not be available unless others were disposed to be sensitive to these expressive actions. It is to these complexities of the social communication of pain that Deyo, Prkachin and Mercer (2004) turn by examining emergence in children and young adults of a capacity to differentiate subtleties in the severity of pain expressed by others.

Sensitivity to another person’s pain can yield adaptive benefits to both the suffering person and the observer. In dangerous settings, the painful reactions of another could warn and permit avoidance of harm. In both hazardous and benign situations, another’s distress may trigger empathy and badly needed care. Consequently, the well-being or even survival of either the suffering person or the observer may depend upon the observer’s perception of pain in the other person. This does not exhaust the possibilities for painful displays having an impact on observers. In situations of interpersonal enmity, recognizing another person’s pain would allow enemies to appreciate the person’s distress and perhaps be encouraged to inflict further harm. The costs and benefits of having others recognize pain also represent incentives to deceive (Hill and Craig, 2002). Lasting consequences of witnessing pain and suffering in another could be changes in feelings of security, trust and attachment to the other person, as well as opportunities to learn about dangerous situations and reactions to them that may be effective (Craig, 1986).

The substantial personal and social consequences arising from sensitivity to another person’s pain suggests the usefulness of evolutionary explanation in understanding the origins and operation of this capability. Natural selection shaped features of human signals of pain, such as cry (Barr, 1999) and facial activity (Williams, 2003). Sensitivity to distress in conspecifics is widely evident in the animal kingdom (Weary and Fraser, 1995). Animals can be classified as precocial, or able to survive from birth without parental care, and altricial, or born helpless and immature, requiring enduring attention and care from parents. Human infants certainly fall into the latter category, with their displays of distress having minimal impact on physical threats other than by instigating protection from others (Craig et al., 2002; Lilley et al., 1997). This is not inevitable, as the substantial incidence of child abuse and even infanticide indicates. Other categories of people who either are born with or acquire some degree of helplessness and for whom adequate care is often not available can be delineated (Breau et al., 2001; Hadjistavropoulos et al., 2001).

Understanding interpersonal sensitivities to pain could enhance dispositions to care for these people.

The neurobiological, psychological and social mechanisms underlying these phenomena demand exploration. Detection of pain in others requires both appropriate perceptual sensitivity and an ability to differentiate non-noxious emotions from noxious experience. Some form of inherent sympathy may operate intuitively, as likely is the case with infants and young children. Fully 55% of the variance in children’s distress behaviors during immunizations was predicted by adults’ coping promoting and distress promoting behaviors (Frank et al., 1995). With older children and adults, cognitive factors become important and it appears possible to deny that others are experiencing pain (Madjar, 1999).

People often are insensitive to pain in others and use of cues appears sub-optimal, but trainable. As Deyo et al. demonstrate, children only slowly acquire the capability and young adults remain inaccurate in their judgments to some degree. Similarly, there is evidence of widespread underestimation of pain severity in children (Chambers et al., 1999) and others with communication limitations (e.g. Hadjistavropoulos et al., 2001; Nader et al., in press). It seems likely that neglect and undermanagement of pain in both health care settings (Breitbart et al., 1996; Foley, 1993; Cherney and Catane, 1995) and in the community or home (Corizzo et al., 2000; Cleeland et al., 1994; Ferrell and Schneider, 1988) can be traced to failure of requisite interpersonal sensitivities.

Appreciating the sources of inaccuracy will require an understanding of both expressive and receptive features of the communication process (Prkachin and Craig, 1994). To date, emphasis in pain assessment has been upon the domains of self-report and non-verbal expression. Insistence upon
self-report (‘Pain is what the patient says it is.’) probably has contributed to failure to be sensitive to non-verbal evidence of pain. An effort to rectify the heavy dependence upon self-report criticized in an earlier editorial in Pain (Anand and Craig, 1996) is evident in a recent publication of a note accompanying the IASP definition of pain. It reads ‘Note: The inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment’ (http://www.iasp-pain.org/terms-p.html).

The signal detection theory and methodology used in the Deyo et al. study is attractive because it renders complex social processes amenable to rigorous study. Evidence that accuracy and the use of more subtle facial cues increases with age confirms an important role for cognitive development and leads to questions as to whether transformations in the ability to make the discrimination reflect maturation or life experience. An admirable feature is the careful delineation of the facial cues that contributed to judgmental accuracy. The approach modeled here could lead to development of sensitive assessment instruments that both focus on useful specific signals of pain and use intrinsic sensitivities to cues of pain in others.

In summary, Deyo et al. (2003) focus upon a basic interpersonal phenomenon that must be understood if we are to appreciate the complexities of pain in the social realities of the lives of suffering people. Inclusive models of pain must consider the social purposes and consequences of pain, for instance, signaling danger to others and enlisting care from others. We often describe pain as private and personal, but research examining communication features of pain is beginning to make it clear that pain often is public and of vital importance to others.

References