

# Chapter 12

## Incognito: The Neuroscience of Grief and Grieving

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### ABSTRACT

*In this chapter, we explore the neuroscience of grief and grieving. Even though the cognitive portion of the initiation into loss implores us to see a correlation between what is expected of us and the concept of reality as we move toward the outcome, the brain is meaning-driven, attempting to match new information with prior understanding. And as neural connections continue to develop and change throughout grief and grieving the “emotional monster” may not be capable of being quieted through support, whether professional or personal. The resistance from a cognitive approach is taken over by our effort to tame that “emotional monster” and images and feelings that are unique to the loss process stunt the capability of the brain to provide rational thinking. We end by picturing how our relentless search began, as we are in awe of what we intuitively know to be true, and that we are not fixed in toxicity, but can change the most challenging neurological situation. Our search was to understand the process of cognition as we move through grief and grieving. We wrote this chapter hoping it would shed a well-lit conversation on the most difficult time we will experience in our lives, the initiation into loss. The light shines on the neuroscience of this journey – as it would not honor ‘self’ if we did not look at ‘self’ in a wholesome way. We frame this chapter through four focus lenses: self and self-discovery focus; emotion focus; social context and role identity focus; and cognitive focus.*

### INTRODUCTION

Grief and grieving come in many forms. Not just through the death of family and friends, but also in the feelings of loss that come with the inevitable life changes we all endure (Kubler-Ross & Kessler, 2005, p. xi). For example, loss of employment and its accompanying status (such as, loss of finances or social circle due to change or loss of the employment with its accompanying loss of home and memo-

DOI: 10.4018/978-1-5225-0640-9.ch012

ries associated with the home); change in marital status with loss of partner's social circle; lessened ability to function (whether due to being disabled later in life, suffering memory-impaired aged, being severely handicapped with a disease such as cancer or Lupus, or loss of a body part due to accident or injury); loss of way (e.g., transitions from high school to college, college to life, and so forth); and loss of financial status due to retirement, theft, death of a spouse, or catastrophic situation, etc. During loss, our world may take on a slowness or a surrealness that propels us to see ourselves as an observer rather than a participant. It seems strange to each of us that the clocks in the world continue when our inner clock does not (Kubler-Ross & Kessler, 2005, p. 29). To understand the grief and grieving process this chapter is written to hopefully shed a well-lit conversation of neuroscience when we are initiated into loss.

The chapter will address common manifestations of grief and how it may affect us physically, mentally, and emotionally, and how each of these may not be the same in two individuals or even occur in the same stage from person to person. The perspective used is as individual as is the person and may cause the differences in manifestations of the grief and grieving. Yet, knowing what is feasible in terms of possible occurrences may help us to allow the person either the support or comfort that he or she needs or the time and space he or she needs, to heal and move on individually. Grief alone has the power to heal (Kubler-Ross & Kessler, 2005, p. 227). Grief is a normal process and each person has their own way to grieve. Each person also has a different timetable to allow grief to help them find a new sense of self.

Like everything physiological, our brains have limitations. Mayer & Moreno (2003) point out limitations are based on cognitive overload (as cited in Bruning, Schraw & Norby, 2011, p. 29). Going through the loss progression requires substantial cognitive processing using all sensory channels available. However, the brain has limited processing capacity available at any moment, thus it may become overloaded and miss part of the grief and grieving leading to incomplete or incorrect thinking, and thus not being able to tame the "emotional monster". Regardless of whether the loss is an actual loss or a symbolic loss of the events related to the loss, grief can affect your sense of self. Grief is actually there to help us to heal and regrow our sense of self (Patricelli & Dombeck, 2015). The grief generally ends when the person has healed and regrown their sense of self.

How do we apply neuroscience research and derived principles to grief and grieving? Possibly by maximizing cognition and reducing emotional overload: (1) find personal space, (2) allow all senses to be applied, (3) tell supportive people that they need to allow your individualized path, (4) create an environment for the monster emotion to take over once in a while; (5) engage in self-discovery; and, (6) allow for self-determination (Eagleman, 2011).

The cognitive abilities have a presence unlike any other during this time of loss, but the presence may be undermined by emotions. We are fragile human beings during the progression through loss and we must have a realization that we will not come out unscathed; it may be an incomplete story for years in the future, and 'self' as we once knew it may no longer exist; our world of self has changed.

## **SELF AND SELF-DISCOVERY FOCUS**

Extended consciousness inevitably leads to the phenomenon of the self. Taken from Dai and Sternberg (2004) we paraphrase Gazzaniga (2000), we are constantly running an autobiographic narrative and this is not trivial as researchers suggest the self is not only of extended consciousness but also by emotional feeling, a position reminiscent of James (1997) who described the phenomenal self as a person's emotional center. James (1997) commented "All we know is that there are dead feelings, dead ideas, and

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