


# LEARNING THROUGH NETWORKS WITHIN EMERGENCY MANAGEMENT RESPONSE

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## Aims

• To improve disaster response and improve the performance of response operations.

• To assist bushfire managers in creating more effective network structures for their emergency management activities.

• To explore the inherent relationship between social networks and learning within the context of emergency management response.

## Introduction

•Previous research has shown that interactions between nodes in network resulted in important opportunities for learning.

•Existing studies of learning theory in human networks have looked at learning problems requiring stable working relationships with no environmental uncertainties.

•With emergency response management learning in extreme situations, must occur “on the fly” . Therefore designs of existing models are useful yet flawed for application.

## Background

• The threat of natural disasters and potential catastrophe is always present.

• Such emergency incidents not only threaten human life and property, but also critical infrastructure

•Communities that do not learn from previous mistakes and lack sufficient capacities for self-adaptation make similar mistakes that increase their vulnerability to disasters.

## Research Problem

•In dynamic environment s like bushfire, the largest problems for managers often derive from collaborative problem solving, learning and other problem s of coordination between the different teams and organisations

•This can be amplified because of failure in communication networks and equipment, poor co-ordination between agencies immediately after the fires and poor overall general community fire preparation.

## Research Questions

•What is the ideal network structure for the emergency management activities?

•How does the network relationship between emergency teams and agencies affect their learning?

## Methodology

•Review literature to determine current state of knowledge in the use of SNA in emergency response, including bushfire-specific SNA work.

•The process of social network analysis typically involves the use of questionnaires and/or interviews to gather information about the relationships between a defined group and network of people.

•Determine/develop applicable social network and statistical analysis tools/techniques that can be employed to address end user(s) needs.

•Work with end user(s) to trail the application of SNA tools/techniques

## Literature Review

• Social Networks - Overview and Brief History

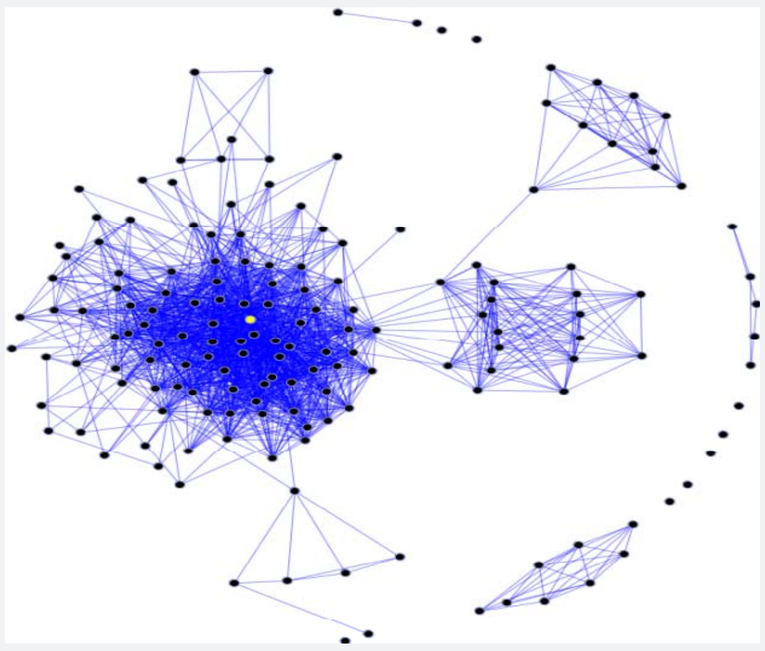
• Social Network Ties
- Granovetter’s Theory on the Strength of Weak Ties
- Strength of Strong Ties
- Degree and Diversity of Ties

•Burt’s Structural Holes Theory
- •Network Efficiency and Effectiveness
- •Network Constraint

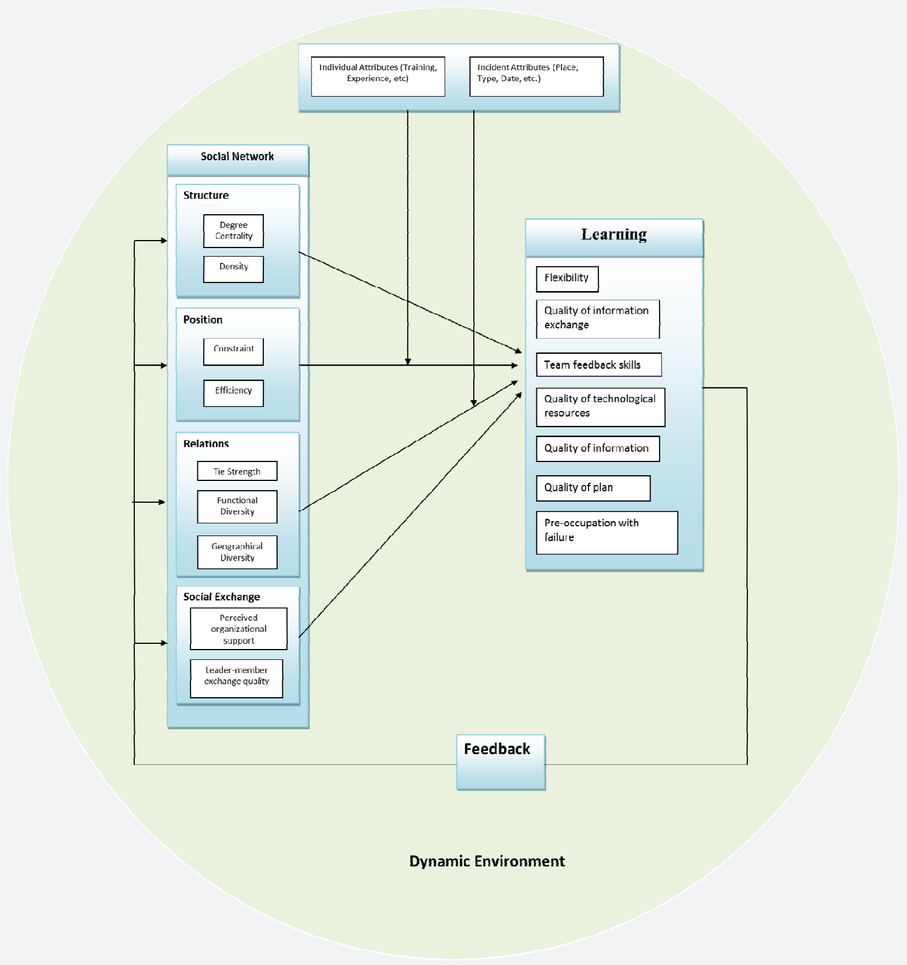
•Social Exchange Theory
•Overview of Learning
•Network Affect on Learning
•Social Network and Learning in Dynamic Environment

## Social Network

**Social network** is a social structure made of nodes (which are generally individuals or organizations) that are tied by one or more specific types of interdependency, such as values, visions, ideas, financial exchange, friendship, kinship, dislike, conflict or trade.



## Research Model

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