

# **Intra-group social networks as social support systems: Lessons learned from IDF basic training with applications for businesses**

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## **Abstract**

This article details the overall process of analysis and intervention for reducing the dropout rate (voluntary and involuntary) of new recruits. The reduction was made possible by rallying and strengthening existing social ties, in particular to support the individual and reduce the level of burnout experienced. The work method – both in the diagnostic and intervention stages – was based on a technique for mapping the relationships that serve as the basis of the internal social network. Social network analysis enables an understanding of the fabric of social relationships, with the potential for increasing the level of social cohesion and harnessing the social structure to achieve operational effectiveness and greater motivation. This article will present possible applications for Business Organizations.

## **Introduction**

Approximately 20 years ago, at the start of my career as an Organizational Development (OD) consultant, I was asked to help commanders of the Infantry basic training program to find ways to reduce the high number of trainees who fail to complete their basic combat training. In Israel, military service is mandatory from the age of 18 and many youths deemed suitable for combat units are placed in the Infantry – even if they did not indicate it as a preference in the placement questionnaire<sup>2</sup> – and required to undergo five months of intensive basic training. The training takes place under field conditions, and many of the recruits face both mental and physical difficulties. Regardless of whether the recruit volunteered for combat duty, and especially if he did not, the recruits face a variety of

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<sup>2</sup> Prior to enlistment, Israeli youths complete a questionnaire indicating where they would like to serve. Although the IDF attempts to take these preferences into consideration, the decision on placement is first and foremost based on military needs, in accordance with the physical and psychological competence of the new recruit.

motivational crises during their training, stemming from the need to adapt to army life in general and from the many requirements associated with combat training.

As a result of the intense, difficult and challenging nature of Infantry basic training, some dropout is inevitable. The majority of soldiers who do not complete the training are characterized by low levels of motivation. At that time (1994), the average dropout rate for infantry basic training ranged from 7-10%. Soldiers who did not complete the course were typically those who were unable to meet the minimum requirements, physically or mentally. In the boot camp where I was assigned as a consultant, the dropout rate was three times higher than normal (i.e., around 30%). There were two major reasons for this:

1. Living conditions were difficult. The base was new and optimal logistic support and administrative services were not yet in place.
2. A relatively high number of the recruits had been placed in Infantry against their wishes.

The high level of dropout created an operational problem. The number of fighters in the company at the end of the five months of training<sup>3</sup> was significantly lower than required for the tasks the company would need to perform in deployment. This meant that the fixed task load would be imposed on a relatively small number of soldiers, leading to faster burnout, and even more soldiers leaving the company after basic training.

### **Diagnostic Analysis**

Based on studies related to the nature and positive impact of Social Support<sup>4</sup> on the individual (Hobfoll & Vaux, 1993), I focused on the relationship between the extent of social support in a group of soldiers participating in the training and individuals' ability to cope with difficulties and stress as central (but not exclusive) factors in determining the dropout rates: "Individual physical and mental health depend substantially on social support

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<sup>3</sup> In the Israel Defense Forces, the Infantry basic training is carried out in framework of companies. At the end of the training, the companies in their entirety (commanders and soldiers) are deployed to an operational battalion.

<sup>4</sup> "Social support refers to a range of interpersonal exchanges that includes not only the provision of physical assistance, emotional caring, and information, but also the subjective consequence of making individuals feel that they are the object of enduring concern by others" (Pilisuk & Parkes, 1981, p. 122).

networks – whether anyone brings you chicken soup when you're feeling blue..." (Knoke & Yang, 2008, p. 5).

The practical implications of social support networks are that people support us in times of crisis, feelings can be shared without fear of condemnation. It is about the people who support and help us in overcoming problems by strengthening our emotional resources by providing assistance, information and advice. <sup>5</sup> (Malach-Pines, 2011, p. 206)

I learned about the strength of social support provided to the individual through analysis of the social networks in the platoon, which constitutes the individual's most meaningful group affiliation during basic training. Using a relatively simple technique, after the first month of basic training (T1), each recruit was asked to indicate, in writing, the names of his three closest friends out of the approximately 40 soldiers in the platoon. I then analyzed their choices and translated the results into an Intra-Group Social Score (IGSS). The score of each soldier reflected the number of times they were designated by another soldier as a closest friend.

On the basis of demonstrating a statistically significant association between the soldiers' social scores (IGSS) at the end of the first month of basic training, and their persistence/withdrawal<sup>6</sup>, the list of soldiers and their respective social strength (as a function of the social points gained), became a key tool **in early identification of soldiers with a high potential for dropping out.**

The result showed that soldiers experiencing the same level of difficulty are characterized by different levels of risk for dropout, in correlation to their social status in the department.

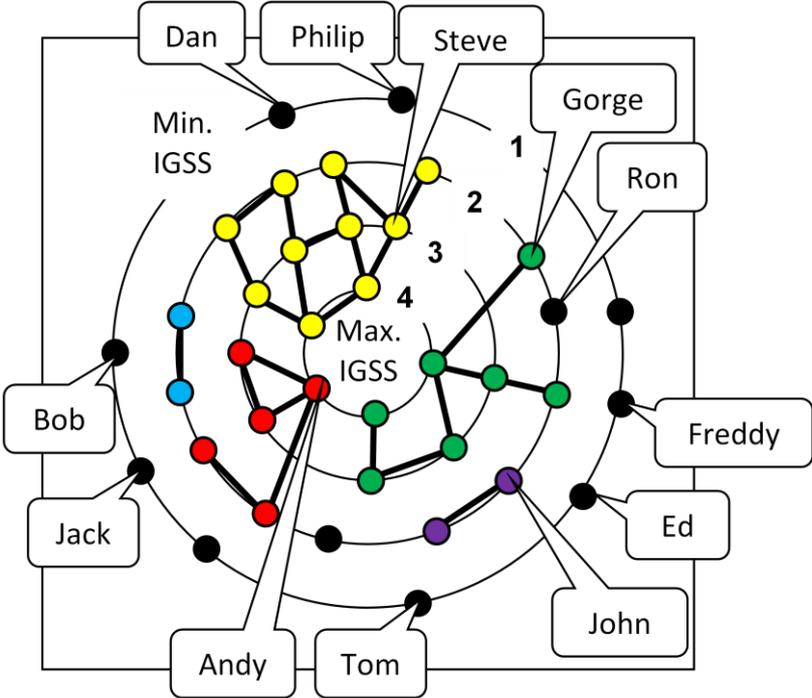
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<sup>5</sup> Similarly, Caplan (1974) defined social support systems as "prolonged social connections with groups of people that can be counted on for emotional support, assistance and resources in time of need, people who provide feedback and who are similar to us in their values and positions."

<sup>6</sup> An example of the analysis of social ties within an organization for understanding of the informal structure can be found in Murray (1970).

<sup>6</sup> On the Chi Square test a link was found between the level of the social score and the possibility of completing/dropping out of basic training.

The next stage was to construct a social map that described each soldier’s position in the platoon in a concentric circle diagram. The higher the IGSS of the soldier, the more centered his position on the diagram. Connecting lines indicate reciprocity, meaning soldiers who cited each other as good friends. Based on the social ties in the platoon, it is possible to create an Intra-Group Social Map (IGSM).



**Graph No. 1**  
**Intra-Group Social Map – IGSM**  
**1<sup>st</sup> month: T1**  
**(n=37)**

In Graph No. 1, different colors indicate soldiers belonging to different social groups within the platoon. The black dots represent soldiers with a low IGSS, who presumably are not linked to any of the sub-groups.

**Intervention**

The ability to identify, relatively early on, recruits with a relatively low IGSS who are in the platoon’s social periphery and an understanding that this positioning can be an indicator of relatively low social support - and consequently a higher risk of dropdown – led to planned and managed activities carried out by the NCOs and Platoon Leaders. These activities were

aimed at creating social ties between those individuals in the periphery (for example, Tom, Ed, Freddy, Dan, Philip, Ron, Bob & Jack) and other recruits with more ties (such as John, Steve & Andy). In this way the social map became an important tool for fostering team spirit and creating a cohesive platoon.

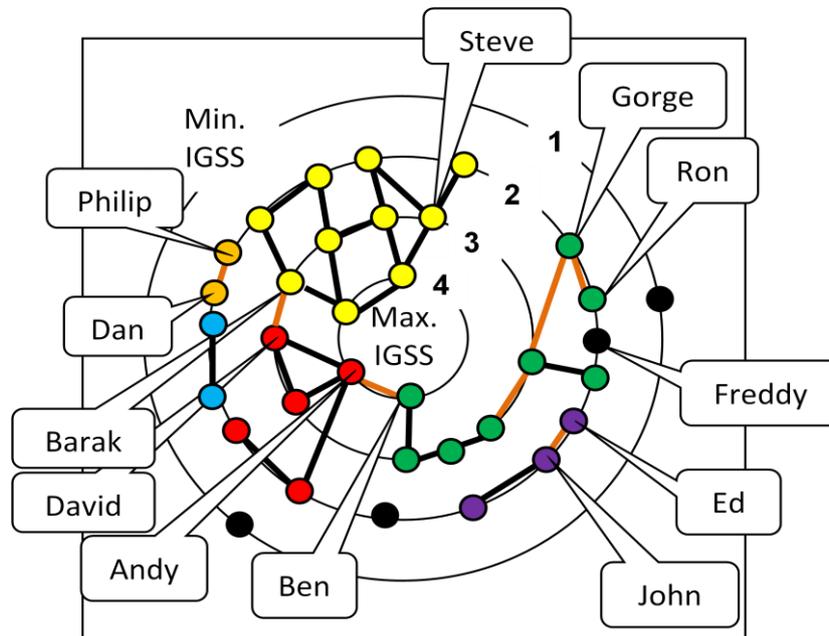
A few examples:

- A soldier located in the social periphery was assigned guard duty (performed in pairs) for 7 nights together with a soldier with a relatively high IGSS – this gave them an opportunity to get to know one another and form the basis of a friendship.
- Following the same logic, the commanders changed the guidelines for seating in the Mess Hall and in the barracks to allow greater interaction between soldiers with different IGSS levels and bring them closer together.
- In other instances, in addition to military/vocational capabilities, the social structure and informal leadership of the platoon was taken into consideration in dividing the soldiers into squads. For example, soldiers with higher IGSS scores were appointed Squad Leaders, enabling them to demonstrate their natural leadership skills.

In the end, decisions made by the commanders based on their knowledge of the platoon's social structure strengthened cohesion and improved effectiveness. Concerns (on the part of some of the commanders) that strengthening the social structure might result in soldiers' rejection of the formal chain of command were disproved. **It turned out that, without a doubt, early identification of the social power centers enables not only strengthening of the platoon by providing support to soldiers in the social periphery , but also elegant dismantling of subgroups that might otherwise concentrate dysfunctional influence and adversely impact on the operational capabilities of the platoon.**

About three months after the initial mapping of social ties (four months into basic training), we again tested the social structure.

The following is an example of the typical resulting picture (new connections are marked in brown):



**Graph No. 2**  
**Intra-Group Social Map – IGSM**  
**4<sup>th</sup> month: T2**  
**(n=34)**

The main changes in social structure after four months of basic training and intervention by commanders (IGSM T2) in comparison to the results after just the first month (IGSM T1) included:

- Three soldiers left the platoon (Tom, Bob, and Jack).
- The number of soldiers with low IGSM scores was lower. Some of them improved their social status (Freddy) or created reciprocal social ties.
- New reciprocal ties were created (for example, Dan & Philip)
- Relatively isolated soldiers established ties which made them part of a social group (John & Ed; Ron & Gorge).
- Social ties were established between soldiers with high social status, which contributed to improving the overall cohesiveness of the platoon (for example, David & Barak, Ben & Andy).
- The internal structure of sub-groups changed (new sub-groups are marked in green).

The overall picture of social cohesion that emerges from IGSM T2 enables the continued planning of activities to further strengthen the platoon:

- Creation of ties between the yellow, green and red sub-groups and their fortification
- Creation of ties between the sub-groups that comprise relatively few soldiers (the purple, orange and blue subgroups)
- Creation of ties between sub-groups with lower overall social statuses and sub-groups with higher statuses

The goal is to reduce the number of soldiers leaving the platoon by creating social infrastructure that allows a high level of effective cooperation and by harnessing the informal structure to the benefit of operations.

**The overall actions taken based on the rating tools and social mapping led to a decline of 30% in dropout rates.**

### **Fighting Employee Turnover**

One of the main characteristics of the neo-liberal labor market is the decline of the “lifetime career” model, and its replacement by employees transitioning, at a relatively high frequency, between different places of employment. This is especially true of organizations based on shift-work<sup>7</sup>. Shift-based organizations traditionally suffer from low levels of employee commitment and high employee turnover rates (Schlesinger & Heskett, 1991). The reasons are related to burnout – physical and mental<sup>8</sup> – the outcome of the difficulties associated with the structure of the day and inconsistencies in the continuum between work and rest. The distinction between work time and non-work time dissolves and borders between day and night become blurred, at a price to individuals and their families (Finn,

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<sup>7</sup> “Shift work refers to a job schedule in which employees work hours other than the standard hours of 8 a.m. to 5 p.m. or a schedule other than the standard workweek - Monday through Friday in the United States.” (Grosswald, 2004, p. 414).

<sup>8</sup> See a report by the National Institute for Occupational Safety and Health (2004).

1981; Srivastava, 2010). Particularly evident are the psychological and physiological effects of working night shifts, which impact on employee job retention (Navara & Nelson, 2007).

These causes compound other underlying causes for the decision to leave a job (which is not characterized by shift-work): Failure to coordinate expectations between the employee and the organization; Discrepancy between the role and its characteristics and the capabilities of the employee; Lack of feedback and training; Limited opportunities for personal development and promotion; Lack of a sense of appreciation from the organization for the effort of its employees; Pressures and related to workload and the nature of the work; and loss of confidence in the company and management (Branham, 2005). Lack of employee satisfaction, resulting from the above, points to the intention to leave (Kraut, 1975).

### **Costs**

The cost of employee turnover is high.<sup>9</sup> The expenses related to human resources include the value of time spent on clarifications/investigations (sometimes even legal), conversations and interviews with employees who leave; compensation paid to those employees; cost of recruiting new employees, cost of advertising positions you need to staff; administrative costs of absorbing new employees; costs of training and placement, and so on (Feldman, 1994). And there are additional costs, such as decreased service quality and bearing the cost of mistakes made by new and unskilled workers (Cascio, 1991). Different equations are used to determine the costs of employment turnover - they all share a distinction between direct costs (recruitment and dismissal) and indirect costs (decline in quality of product or service due to employee turnover). In addition, there are economic costs associated with the psycho-social impact of turnover, such as decreased morale in your organization (Tziner & Birati, 1996).

In the past, the cost of employee turnover has been estimated as ranging from \$1000 for a clerical worker with no special high-level skills (Hulin, 1966), to \$300,000 for a fighter pilot

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<sup>9</sup> A collection of studies on the cost of employee turnover is available on the website of Sasha Corp. (an HR Consulting firm founded in 1984). <http://www.sashacorp.com/turnframe.html>

(Atchison & Lefferts, 1972). A few years ago, Cornell University published an international study that found that the cost of replacing a telephone contact center employee could reach as much as 3-4 months' of an employee's salary. The turnover rates in such organizations is high, ranging from 15% in countries that have strict employment regulations (for example, Scandinavian countries) up to 25% per year in countries such as the United States, Canada, and the United Kingdom, which have more liberal labor laws (Holm, Batt & Hotgrewe, 2007, p. 5).

### **Reducing Employee Turnover**

Many studies have attempted to map the factors that cause employee turnover and determine their relative impact (Griffeth, Hom & Gaertner, 2000; Hom & Griffeth, 1995; Cotton & Tuttle, 1986). For the most part, no correlation was found between leaving a place of employment and gender, race<sup>10</sup> or level of intelligence, but a correlation was found to general satisfaction ( $\rho=-0.19$ ) and commitment to the workplace ( $\rho=-0.23$ ). The correlation to the cohesion of the working group was generally not high ( $\rho=-0.11$ ), however a relatively strong correlation to satisfaction with pay levels was found ( $\rho=-0.07$ ) (Griffeth, Hom & Gaertner, 2000, p. 479-80).

A possible application of IGSM and IGSS to business organizations suffering high levels of employee turnover stems from the relationship between the positioning of the individual with the internal social network of the organization and the probability that the individual will leave the organization. Translation of the individual's preferences regarding colleagues in a team (or shift) into a social score (IGSS) enables early detection of those employees most likely to leave (those with the lowest scores and located on the margins of the social map). As a result, subject to organizational policy, intervening steps can be taken to strengthen social ties, in a manner that will increase loyalty and retention, reducing unwanted and unnecessary employee turnover.

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<sup>10</sup> This despite indications that low representation of ethnic minorities in the workplace can lead to withdrawal. (Cox & Blake, 1991; Hom & Griffeth, 1995).

Beyond the direct use of social scoring and mapping to reduce turnover, it can also play a role in determining the placement of employees, strengthening employees' sense of control, and creating cohesive teams<sup>11</sup>. Assistance in creating multiple stable social ties and improvements in social status can even contribute to the employee's mental and physiological health (Marmot, 2004).

In addition, social mapping enables the detection of talents among workers - a process that can improve decision-making with regard to promotion to leadership roles. Team leaders and managers who enjoy a high level of social acceptance will contribute to reducing turnover and fostering a good atmosphere in the workplace.

### **Additional Applications**

Mapping social relationships with the organization and early identification of employees with low probabilities for long-term employment enables better planning and utilization of internal training processes:

- Employees with higher social scores and a central position in the internal social network can support the process of internal training organization and lead them, serving as tutors for new and inexperienced employees.
- Mapping the target populations for training within the organization can improve the potential for retention in the organization (based on employees' positioning in the social network), and thereby improve the ROI.
- Training for management reserve candidates can be directed at the employees with high social scores.

Moreover, the analysis of social relations map from the Human Resources point of view enables understanding (as well as action) in a variety of areas such as: successful integration of minorities, providing equal opportunities for women, creating synergy between veteran and new employees, and so on.

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<sup>11</sup>For example, see the mechanism for selecting new employees by veterans in the Whole Foods food retail chain in the U.S. [http://www.washingtonpost.com/business/capitalbusiness/at-whole-foods-a-survivor-like-ritual/2012/06/22/gJQAI9pCOV\\_story.html](http://www.washingtonpost.com/business/capitalbusiness/at-whole-foods-a-survivor-like-ritual/2012/06/22/gJQAI9pCOV_story.html)

It also enables mapping of social relationships, distinguishing between sub-groups of employees that are not necessarily similar, their positions on labor relations in the organization, management decisions on changes, and the work routine. The ability to drive change, overcoming objections and harnessing elements of support, is more easily made possible through the use of social mapping:

"...Social networks affect perceptions, beliefs, and actions through a variety of structural mechanisms that are socially constructed by relations.... Direct contacts and more intensive interactions dispose entities [individuals in our case] to better information, greater awareness, and higher susceptibility to influencing or being influenced by others" (Knoke & Yang, 2008, p. 5).

### **Conclusion**

Lesson learned from IDF's infantry basic training show a clear connection between an individual's Intra-Group Social Score (IGSS) and the probability of drop/withdrawal. Results showed a 30% improvement in drop rates.

Letting employees to choose work-colleagues (or to influence team casting) will enable Intra-Group Social mapping. Having the social map as a managerial tool for the Organization's "Human Dimension", will lead to reduced employee turnover, to improved effectiveness of training in the organization, and to more successful development of those individuals with leadership potential and their natural progression into management positions.

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