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**Organization Studies**

# **Can listening in mentoring relationships increase role clarity?**

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### **Abstract**

Mentoring relationships are seen as holding great potential to enhance the development of individuals. Yet what turns mentorship into a meaningful developmental experience? Mentors may provide a meaningful developmental experience when they listen. Therefore, I test the consequences of mentor listening on mentee role/situational clarity vs. confusion at work. I test the hypothesis in a sample of formal mentoring relationships of newly hired engineers with senior engineers during their integration process to the organization. The mentoring relations of 16 dyads were tracked over three months, yielding a total of 128 weekly observations. Multi-level modeling (HLM) was used to study the effects of time and listening for each mentee (Level 1) and listening across mentees (Level 2). Results support the research hypothesis and show that mentor listening is positively associated with mentee clarity (regarding both one's role and one's sense of situational clarity), and negatively associated with mentee confusion. The results suggest that the strongest association is between listening and situational clarity. Listening has strong short-term effects on situational clarity, but weak, slowly accumulating effects on more general role clarity. All the hypothesized associations were stronger at Level 2, in absolute value, relative to Level 1. Thus, the beneficial impact of listening appears to aggregate across meetings, such that good listening in one meeting spills over to general clarity and lack of confusion across other meetings. Research findings demonstrate the importance of feeling listened to for mentee's sense of clarity as a direct link to mentee wellbeing. I discuss how to enable listening both at the organization level (HR Dept., mentoring program owners, managers etc.) and at the mentor level.

*Keywords: Mentoring, Listening, Clarity, Role clarity, Confusion*

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## Introduction

*It is easy to get lost here, it's not just a question of a mentor... it is also important what the new employees desire to look for ... I'm looking for more personal contact (Daniel, mentee)*

To foster executive development, many contemporary organizations encourage various forms of mentoring. Indeed, mentoring relationships are seen as “having great potential to enhance the development of individuals in both early and middle career stages” (Kram, 1985: 110). Yet what turns mentorship into a quality and meaningful experience? The quality of mentorship may depend on personal connections, which may depend on mentor listening.

Indeed, mentoring research suggests that **Listening** serves as one of the most consequential skills for mentors (Allen & Poteet, 1999; Brownell, 1994; Campbell & Campbell, 2000; Daresh & Playko, 1995; Galbraith, 2001; Petress, 1999; Southworth, 1995 in Young & Cates, 2010, 218). Mentor listening is associated with mentee motivation (Cobb, 2000, Stine, Thompson & Cusella, 1995), confidence at work tasks (e.g. teaching), competence (Clifford, 1999), diminution of loneliness, and higher self-esteem (Liang *et al.* 2002). Moreover, it helps build employee trust and commitment to the organization. Listening helps mentees to manage the tension between opposing needs for independence and for belonging (Young & Cates, 2010). The reduction of that tension occurs through the emphatic dimension in listening that creates trust and a safe learning environment (Young & Cates, 2010). This tension, if not addressed, may cause confusion and lack of clarity. That is, lack of clarity may be ameliorated via listening. In a process of listening, communication among various aspects of the self becomes more harmonious (Rogers, 1951). Specifically, the lack of harmony among these aspects of the self often creates conflict and confusion. In many cases, people handle this tension by suppressing some of their inner voices. However, listening brings awareness of suppressed aspects of the self. In creating this awareness, people may gain clarity. Hence, I argue that mentor listening in mentoring relationship creates self-clarity.

The focus on listening in this study, takes it to the realm of deep quality relations: trying to understand what is a **quality** and **meaningful** mentorship. The assumption that high quality mentoring is based on a high level of listening is consistent with Snowber's (2005) view in her poetic essay that “*Explores mentoring as an act of deep listening in [just] the way an artist must ... listen in the creative process.*” (pp. 345).

To develop the hypotheses, I review the concept of mentoring as used in organizations. Afterwards, I relate to listening as a psycho-social function in mentoring. Finally, I consider the effects of mentor listening on mentee clarity vs. confusion at work.



## Theoretical Background

### **Mentoring in organizations**

Traditional mentoring in the organizational context refers to a senior employee/manger acting as a mentor to a “young adult” in order to provide that young adult: sponsorship, professional knowledge, and psycho-social support through listening, counseling and friendship – all of which assist in better employee development (Allen *et al.*, 2004; Eby *et al.*, 2008). Two broad categories of mentoring functions are: career development and psycho-social support (Kram, 1983).

The origin of the term Mentor is derived from the “Odyssey” by Homer from the Greek mythology. Mentor was the tutor given responsibility for caring for Odysseus's son, Telemachus, when Odysseus left his homeland Ithaca to fight the Trojan War. Mentor was described as providing both wise and sensitive counsel to the son so as to groom him to become king (Bell, 1996; Clawson, 1980 in Russell & Adams, 1997; Allen & Eby, 2011; Shea, 1994). From that story, the personal name Mentor has been adopted in English as a term connoting father-like teacher<sup>1</sup>, someone who shares knowledge and reveals wisdom to a less experienced person. Although the roots of Mentoring in the literature are ancient, in academic organizational literature the concept was revived in the works of Kram (1983; 1985) that posit mentoring as a powerful relation that builds a fruitful organizational environment and holds great potential for individual development (Dalton & Price, 1977; Hall, 1976; Levinson *et al.*, 1978 in Kram, 1985)<sup>2</sup>.

Kram's works (1983; 1985) were followed by many empirical studies that lead to meta-analyses (Eby *et al.*, 2008; Allen *et al.*, 2004; O'Brien *et al.*, 2010) and theoretical reviews (Kammeyer-Mueller, 2007; Underhill, 2005). Below, I briefly review the main findings. First, Eby *et al.* (2007) ask the question, “Does mentoring matter?” and compare three major areas of mentoring – youth, academic, and

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<sup>1</sup> The etymology of the word ‘mentor’ is based on the noun ‘Mentos’, which literally means: intent, purpose, spirit or passion (Snowber, 2005).

<sup>2</sup> Those pioneering qualitative works emerge from both **adult development** and **career theorists**.

workplace. They found that outcomes of mentoring depend on **context type**: academic mentoring was found to be the most effective type. The reason for this is that mentoring in academia is a core element of the institution mission. Thus, the mentoring role is part of the job training of researchers. Second, O'Brian *et al.*'s (2010) meta-analysis found that male protégés report receiving less psychosocial support than female protégés. Third, several meta-analyses found that the strongest impact of mentoring is on career development measures, such as job satisfaction and promotions, etc. (Kammeyer-Mueller & Judge, 2008; Underhill, 2006). Fourth, Kammeyer-Mueller and Judge (2008) raise the importance of understanding the process of mentoring and not only its quantitative outcomes, due to a modest overall effect size for the impact of mentoring on different variables. Finally, Allen *et al.* (2004) indicate that higher satisfaction from a mentoring experience is found in dyads where the mentors expressed behaviors associated with psycho-social mentoring functions such as counseling, role modeling, acceptance, friendship etc. Following these findings, I also consider listening as a psycho-social function, which has yet to be examined. So, Allen *et al.*'s (2004) finding is significant for this study, since I seek to understand "what is a quality mentorship experience?" and Allen *et al.* (1999; 2004) conclude that both psychosocial mentoring functions "represent a deeper, more intense aspect of a mentoring relationship" (132); and that "psychosocial functions depend more on the quality of the relationship" (Kram, 1985, 32 in Allen *et al.*, 2004).

In summary, in the framework of mentoring literature I seek to understand the process of mentoring relations as a dyadic phenomenon, as suggested by Kammeyer-Mueller and Judge (2008). I seek to understand what a *quality* and *meaningful mentorship* is. I assume that *listening* is a core element that indicates quality mentorship; accordingly, the next theoretical chapter is devoted to listening. Following the discussion of listening, I consider its effects on psychosocial function. Specifically, I explore the effects of mentor listening on work *clarity vs. confusion*.

## Listen to the beat

I assume that listening can produce positive consequences for both protégé and mentor. Although listening appears to be a commonplace behavior, even a trivial element in human interaction, in practice effective *listening is rare*. For example, listening receives dramatically less human attention than talking (Kluger, 2011). The root cause of our poor listening is the tendency to evaluate the speaker (Rogers, 1991/1952), the instinct to judge and put things into schemas, into approval or disapproval – right or wrong. The solution for this listening failure, according to Rogers (1991/1952), is *listening with understanding* which means stepping into the other person’s shoes, “sensing how it feels to be the person.” One of the main reasons people face difficulty in listening with understanding is fear. Fear stems from the risk of entering another person’s world without judgment, which may cause the listener to be exposed to material that will force him or her to change (Rogers, 1991/1952).

Listening for understanding appears similar to three other concepts of listening. One is **active** and **empathic** listening, which refers to the attempt on the part of the listener to put the speaker in the center (instead of himself/herself), and to make the speaker feel that his or her messages are accurately understood (Gordon, 1977). Second, is the concept of **Facilitative Listening** (FL) that emphasizes the notion of supportive intent on the part of the listener (Kluger, 2011). FL includes **active, emphatic,** and **attentive** listening, the primary goal of which is to benefit the speaker. Third, another aspect of listening is **directive**, which includes giving advice and offering helpful perspectives (Goodman, 1988; Johnson, 2003 in Young & Cates, 2010). Directive listening partially contradicts the notion in FL based on the ‘Rogerian’ perception of ‘listening with understanding’, but actually in FL when the primary goal is to benefit the speaker, only the speaker will be able to determine the effectiveness of listening<sup>3</sup>. In the case of newcomers to an organization, if the goal of

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<sup>3</sup> It is important to note that although I emphasize the importance of listening in influencing the protégé, listening alone would probably not suffice, as both listening and verbal expression (talking)

the protégé for example is to collect as much information as possible, the directive aspect in listening might be most helpful for the mentee (Young & Cates, 2010).

The different aspects of listening seem to lead to different **consequences** for the speaker. Both listening behaviors and their consequences have two salient and opposing aspects: **constructive** listening behaviors and consequences and **destructive** listening behaviors and consequences (Boskila-Yam & Kluger, 2011). **Constructive listening behaviors** signal to the speaker ‘I am listening to you and I understand’. Such listening behavior may include: asking for more details or encouraging clarification of a problem, etc. Constructive listening behaviors in turn, lead to **constructive consequences** for the speaker: feeling cared for by the listener; feeling it is easier to open one's heart; feeling as a unique and valuable human being, and the primary consequence is **feeling understood** (Dolev & Kluger, 2011). **Feeling understood** was found to mediate effects of **listening** on **well-being** (Dolev & Kluger, 2011). Listening for understanding impacts the well-being of a person, as argued by Rogers (1951; 1957), because listening for understanding is the act which can restore the speaker's internal self-communication. These ‘healing’ elements of listening on the self are explained by the structure of the self. The self is composed of different voices which may contradict each other and create a sense of conflict, tension, or confusion (Rogers, 1961; Fisher *et al.*, 1981). In the process of listening, Rogers (1951) assumes that those voices can negotiate with each other<sup>4</sup>. That is,

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appear to produce perception of influence (Ames, Benjamin & Brockner, 2012). Thus these findings may tap directive listening and suggest that good listening is coupled with the ability to direct and share information. However, in this research I largely focus on listening and its active elements so as to make the research manageable.

<sup>4</sup> Nir (2008 in her dissertation) extends the idea of the ‘Negotiation’ self, and presents various points of view; from psychodynamic tradition (Berger, 2000; Freud, 1966/1979; Freud, 1923/1961; Lear, 2005), the self is viewed as “immersed in a perpetual state of battle between the Id, the Ego, and the Super-ego that continually pull the self in opposite directions.” (27); socially oriented, developmental theories (Adler, 1954/1927; Erikson, 1963/1993; Fromm, 1955; Horney, 1946) suggests that “each stage of human development is defined by a polarity in which a positive feature is pitted against a negative one, which sets a characteristic psychosocial conflict in motion. The inner conflict experienced in each stage is perceived as the source of, and the opportunity for growth and self-development.” (28); phenomenological tradition suggests that “the single most important motive in human behavior is to maintain the unity of the conceptual system. Therefore, the two major sources of stress are caused by conflicts and inconsistencies within the self-system, and between the self-system and reality” (Lecky, 1945) (29); “motivation theorists suggest that the basic human psychological

listening create the opportunity of an inner dialog. That inner dialog first allows suppressed voices to come out, and second, enables the different voices to be integrated in harmony. Thus, by this inner dialog, one central consequence of listening for the speaker is a reduction in **confusion** and an increase in **clarity**. Indeed, Rogers suggests that certain types of **listening** - such as active and emphatic - can dramatically change the person being listened to.

In this research I will use the concept of Facilitative Listening (FL) that includes dimensions of active, emphatic listening with supportive intent where the primary goal is to benefit the speaker. The level of FL will be determined by the perception of the speaker (mentee), specifically by the mentee's feeling of **being understood**, which leads to a sense of relief and a higher sense of self-clarity. The mentee can reach this sense of self-clarity as a result of rebuilding his or her inner communication. Since the focus of this research is the effect of mentor listening on the confusion vs. clarity on the part of the mentee, the next chapter will discuss these concepts.

### **Surrounded by uncertainty: from confusion to self-clarity**

In this section, I first explain the constructs of self-clarity and confusion. Next, I relate self-clarity and confusion to the context of organizations and to constructs typically considered in organizations, such as role-clarity and uncertainty. Finally, I emphasize how these constructs are especially relevant to newcomers to an organization.

Confusion and self-clarity are constructs that appear in unrelated literatures. First, **Self-clarity** is of interest in social psychology. It is defined by the extent to which self-beliefs are internally consistent and stable (Campbell et al, 1996). Self-clarity is also related to self-disclosure. Self-disclosure is an act that allows one to

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structure consists of two sets of conflicting needs and drives (Deci & Ryan, 2000; Kluger & Ganzach, 2004; Nohria & Lawrence, 2002; Ronen, 1994; Schwartz, 1992; Schwartz, 1996) (29)

make sense and gain understanding of one's experiences by reintegrating emotions and cognitions (Lepore et al., 2000 in Lloyd, 2012), which in turn leads to a sense of clarity (Lloyd, 2012). Second, **Confusion** is of interest in psychiatry. It is defined as a pathological-mental state characterized by loss of orientation regarding time, space, place, person, or situation. Confusion causes lack of orderly thought and inability to act or choose decisively in performing daily activities (McGraw-Hill Concise Dictionary of Modern Medicine, 2002; Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003; The American Heritage Medical Dictionary, 2007; Dorland's Medical Dictionary for Health Consumers, 2007; Mosby's Dental Dictionary, 2nd edition, 2008; Mosby's Medical Dictionary, 8th edition, 2009). **Confusion** is also related to emotional stress (Fontani *et al.*, 2012; Ivancevich & Donnelly, 1974) and various psychological disorders (Inouye *et al.*, 1990). Notwithstanding, confusion also appears as a common experience in the contemporary organization, as captured perhaps, by notions of uncertainty, ambiguity, and lack of role clarity -- variables that are frequently researched in organizational literature.

**Uncertainty** as a broad construct refers to the inability to predict the future (Van den Bos & Lind, 2002). Two types of uncertainty are suggested: first is **informational uncertainty** which refers to the state in which the individual has limited information from which to make a social judgment (Van den Bos, 2009a); A second type is **personal uncertainty**, which refers to the "subjective sense of doubt or instability in self-views, worldviews, or the interrelation between the two" (Van den Bos, 2009a, p.198). Both types of uncertainty explain major parts of the infrastructure for psychological states of confusion or lack of self-clarity; **Personal uncertainty** shares the same symptomology as self-clarity regarding the consistency and stability of self-views/beliefs. It emphasizes the 'subjective' side of uncertainty for the individual, while **informational uncertainty** emphasizes the 'objective' side of uncertainty, since it depends on the external environment. Accordingly, organizational

attempts to cope with uncertainty are expressed mainly in the domain of informational uncertainty, which seems conceptually easier to manage. Indeed, the second organizational construct that emerges from the organizational literature is **Role clarity**, which is defined as the sufficiency of given information regarding the expectations associated with one's role at work (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964 in Panaccio & Vandenberghe, 2011; Ivancevich & Donnelly, 1974; Hui & Lee, 2000). A central assumption underlying the construct of role clarity and this chapter as a whole is that one of the deepest intrinsic needs of a human being is the **quest for certainty**, the need for clarity, the need for control (Ivancevich & Donnelly, 1974; Hui & Lee, 2000)<sup>5</sup>. Accordingly, studies report connections between low role-clarity and different stressors at work (Panaccio & Vandenberghe, 2011; O'driscoll & Beehr, 2000), such as role conflict, work overload, role ambiguity, career-goal discrepancies, or dysfunctional organizational climate (Allen et al, 1999). Hall (2008) determines that a high level of role clarity enables employees to act better and to be more determined in uncertain conditions. Indeed, role clarity should be the first priority of the organization in its attempt to reduce informational uncertainty, and so fulfill the need for certainty on the part of the individual. Certainty may be especially important for newcomers in an organization, the focus population of this research, and so is the next topic to be discussed.

The process of entering a new workplace undermines **certainty** on the part of the newcomer. It is a result of meeting with the unfamiliar. Therefore, the period of entry into a position is accompanied by a significant amount of confusion "... the organizational entry process is ambiguous ... it provoke[s] anxiety ... " (Cable & Kay, 2012, 8). This context expands the scope of the phenomenon of work confusion.

**Work confusion** in the context of newcomers to an organization is reflected in the

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<sup>5</sup> Hui & Lee (2000) used the construct of self-determination (Deci, 1975), while explaining the need for clarity: "Self-determination is the notion that a person is in control of one's own destiny" (215). They also suggest based on several studies and meta-analysis, that low levels of personal control related to a variety of negative consequences of undesirable emotional and behavioral such as: job satisfaction, organizational commitment, motivation, absenteeism, performance, physical and psychological symptoms of stress.

tension between the need for belonging and independence (Miller, 1995 in Young & Cates, 2010); tension between conforming to the demands of a new place and the need for individuality (Jameson, 2004 in Young & Cates, 2010). Cable & Kay (2012) broaden this claim, suggesting that this tension is actually embodied in the self-negotiation for identity. They recognize that the organizational entry process is an unusual period for negotiating newcomer identity<sup>6</sup>. They find that those who take advantage of this opportunity for self-verification, which means bringing others to know them as they see themselves (Swann, 2010), gain greater work satisfaction and higher evaluations from their managers. I extend this understanding through the focus on listening. Listening may enable the space for self-verification by internal negotiation for one's identity as Rogers (1951) suggests. As a result, the sense of **work confusion** can be reduced via a listening experience, and it may lead to the emergence of a sense of **clarity** "In a context marked by continuous change and ambiguity, interpersonal peer relationships may help clarify one's needs, sense of identity, and self-worth" (Allen *et al.*, 1999, 465). Yet, in this account it is not clear how interpersonal relationships assist in increasing the newcomer's sense of clarity. I focus on the mentoring relationship and argue that the listening component determines the quality of the mentorship interaction with the newcomer. Therefore, building on the review of listening in general and on the present consideration of listening in the work context in particular, I hypothesize that:

**H1: Facilitating listening (FL) in mentoring relation**

- (a) Increases role clarity
- (b) Decreases role confusion
- (c) Increases situational clarity

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<sup>6</sup> Through the way they act, dress, the way they describe and introduce themselves and their experiences. (Cable & Kay, 2012)



## Method

### *Setting and context*

The present study was conducted in a manufacturing division of a global American high-tech corporation located in Israel. The organization's main function is the production of sensitive nanotechnology products. The investigated organization has about 4,000 employees, mostly engineers and technicians. In the last year approximately 50 new engineers were recruited as part of an organizational change. A standard entry policy at the organization includes formal mentoring: each new employee is mentored by senior employee for his or her entry period, to help him/her integrate, learn, and socialize into the organization. These organizational settings provided an excellent opportunity to test the study hypotheses: first, because formal mentorship is accepted at the organization as a standard; thus, the dyads were coupled without any special intervention for this research; Second, the unique characteristics of this organization create a context marked by high levels of uncertainty: the organization is part of the private sector, a global, high-tech, 'knowledge-intensive' organization, which on the one hand is part of a milieu characterized by intensive rapid changes, and yet on the other hand manage to maintain relatively stability. In the organizational literature such organization can typically be characterized as "loosely coupled," which means that the environment is a highly significant factor in affects the organization's chances of survival (Meyer & Rowan, 1977; Pfeffer & Salancik, 2003). This high dependence upon the environment leads to continuous uncertainty for employees (Weick, 1976, 2001). Therefore, investigating the impact of mentor listening on clarity vs. confusion upon the new employee is highly relevant in such organizations. Moreover, this organization provides a good case study for other similar organizations, where market conditions follow rapid technological developments, leading more and more organizations to deal with this state of perennial uncertainty and confusion:

New techniques, new approaches, new technologies upset the old order and change the rules of the game. This is what trucking and air transportation did to railroads, what container shipping did to traditional ports, what superstores did to small shops, what microprocessors continue to do to computing and what digital media might do to entertainment... Andrew Grove calls very large change in one of the competitive forces in an industry, a “10X” change, suggesting that the force has become ten times what it was just recently. In the face of such “10X” forces, a company can lose control of its destiny. (Grove, 1997, CEO of Intel corporation between 1987-1998)

It is also important to mention the unique organizational culture that pervades the investigated organization, as being part of a manufacturing division. Its culture of 'copy exactly' which strives for clarity, leans on clear procedures and conformity to the opportunities that the organization is aiming to maximize.

To summarize: on the one hand the organization investigated is a good platform from which to learn about other similar organizations. On the other hand, it has its unique characteristics. These two aspects need to be taken into account.

### ***Participants***

The sample of this study consisted of 16 dyads, selected at random from the entire engineer population at the investigated organization that are engaged in formal mentoring relations: 16 senior engineers are the mentors while 16 newly hired engineers are their mentees. All participants were engineers, a role which is considered a core job at the organization. All participants hold academic (Bachelor/Master/PhD) degrees (Physics, Chemistry, Chemical/ Material/ Mechanical/ Electronic Engineering). Table 1 presents the relevant demographic data on all participants.

Table 1: Dyads' characteristics

Dyad	mentor			mentee		Dyad data			
	age	gender	Seniority in years at the org.	age	gender	Mentorship duration (*from the beginning of the research measurements in months)	Average number of meetings per week	Average duration of the meeting	Number of weeks measured
1	31	male	1.5	30	male	6	1	0-20 min	13
2	33	male	1	28	male	2	1	0-20 min	12
3	28	male	1.8	45	male	2	1	40-60 min	7
4	42	male	10	31	male	9	6	0-20 min	1
5	31	male	6	28	male	7	3	20-40 min	12
6	30	female	2.5	24	female	2	2	1 hour	7
7	37	male	2.1	38	male	2	2	20-40 min	12
8	30	male	1.7	34	male	2	6	0-20 min	6
9	40	male	10	26	female	2	3	0-20 min	1
10	36	female	14	34	male	1	4	20-40 min	8
11	33	male	9.6	35	male	3	1	0-20 min	12
12	40	female	5.6	30	male	4	2	20-40 min	5
13	34	male	1.5	25	male	2	3	20-40 min	12
14	37	male	5.5	30	male	2	5	20-40 min	8
15	28	male	2	24	female	1	2	20-40 min	4
16	38	male	10	24	female	1	4	1 hour	8

### Measures

All measures are based on items presented on an 11-point Likert scale ranging from (0) “strongly disagree” to (10) “strongly agree”

*Listening* was assessed with items taken from the Facilitating Listening Scale<sup>7</sup> (FLS; Bouskila-Yam & Kluger, 2011). I used 18 items to measure the perspective of the mentee (speaker) regarding the listener behavior of the mentor (listener). Accordingly, only the two relevant parts of the FLS were chosen for this research: *Constructive listening skills* (on the part of the listener) and *positive consequences* (for the speaker). Thus, all listening items pertained to constructive listening behaviors on

<sup>7</sup> See in index 1 the full FLS (Bouskila-Yam & Kluger, 2011) (The items used for this research are marked)

the part of the mentor such as: “Asks questions that show his/her understanding of my opinions”, “Encourages me to clarify a problem,” etc.; and to positive listening consequences for the mentee such as: “Feels that s/he cares about me”, “Feels comfortable”, “Feels that it is easy for me to open my heart” “Better understanding of myself” etc. There were two modes of administering the listening items: overall evaluations and weekly reports. For the overall evaluation, the 18 items were prefaced with the following introduction: “Below are 18 items relating to the communication with your mentor. Please rate the level of your agreement in how you feel in your mentoring relationship in aggregate, based on what you have been through together until now”. A similar and appropriately adopted version was administered in the weekly questionnaires: “Below are 18 items relating to the communication with your mentor. Please rate the level of your agreement with the items regarding how you felt specifically in your 1:1 meetings this week during the interaction with your mentor. Please refer to the most meaningful meeting [this week]”. The reliability of the listening scale was .99 for the weekly sample (N=128).

*Role clarity and Role confusion* consisted 14 items, divided into two scales (clarity and confusion). All items as a whole were pre-tested on 111 participants, the majority of whom were from the investigated organization in this study. An Exploratory Factor Analysis (EFA) with a varimax rotation yielded four factors, only two of which were meaningful:<sup>8</sup> role confusion (consisting of 4 items) and role clarity (consisting of 3 items). The two unmeaningful factors, measured psychological/physiological states related to confusion such as anxiety and concentration and consisted of 2 items each. Because of the weak correlation of those items to role confusion (Factor 1) they were discarded, except for the item: ‘I feel vague’. Below is a detailed explanation of each of these two scales.

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<sup>8</sup> See index 3 for FA full results

*Role Clarity* was assessed in part upon an existing instrument of *Self-Concept Clarity*<sup>9</sup> (SCC; Campbell *et al.*, 1996) adapted to measure self-clarity at work; and mostly on the definition of role clarity as 'the sufficiency of given information regarding one's role at work' (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964 in Panaccio & Vandenberghe, 2011; Ivancevich & Donnelly, 1974; Hui & Lee, 2000). Role clarity consisted of 4 items. One item from the SCC scale (item 11): "In general, I have a clear sense of who I am and what I am" was adapted to the study context as: "In general, I have a clear sense of my job as an engineer at the factory". The other three items developed for this research were based on the definition of role clarity: "My role in achieving the organizational targets is clear to me," etc. The reliability of the role clarity scale was .71 in the pre-test (N=111) and .77 for the weekly sample (N=128).

*Role Confusion* was assessed in part upon an existing instrument of the *Confusion Assessment Method* (CAM; Inouye *et al.*, 1990) which was built to detect acute confusion states and consists of several open questions that distinguish categories of inattention, disorganized thinking, conciseness, disorientation, memory impairment, perceptual disturbance, etc. Since the CAM was developed for pathological confusion, I adapted it to measure 'normal' situational confusion at work and built items based on part of the above categories. Accordingly Role Confusion consisted of 6 items such as: "I feel my thought is not organized", "I feel vague for many hours in the daily work", "I feel lost in my role". All items were adopted for both mentors and mentees in both pre-questionnaire and weekly measurements, except for one item that wasn't included in the weekly measurements – "There are days that I have a certain attitude about my job as an engineer and there are other days that I have a completely different position." This specific item is built upon an item from the self-concept clarity SCC scale: "On one day I might have one opinion of myself and on another day I might have a different opinion." (See Appendix 2, item number 2). These six

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<sup>9</sup> See index 2 the full Self-Concept Clarity scale (Campbell *et al.*, 1996)

items together with the 4 items that measure role clarity were prefaced with the following introduction in the pre-questionnaire: "Please rate how much you agree with each of the 10 items below. Treat them as part of your job as an engineer at the factory, and the average feeling that you sense about your role as a whole." A similar and appropriately adopted version was administered in the weekly questionnaires: "Please rate how much you agree with each of the following 9 items with regard to the specific feelings after your 1:1 meeting with your mentor for this current week." The reliability of the confusion scale was .84 for the weekly sample.

*Situational clarity* assesses the situational perception of the mentee after a 1:1 meeting with his mentor. It consists of two questions presented on an 11-point Likert scale ranging from (0) "not at all" to (10) "very confused/high clarity" with the following introduction: "please position yourself on the scale below, how much confusion (reversed coded)/clarity did you feel after your 1:1 meeting with your mentor, where 0 indicates none at all and 10 very confused/clear". The reliability of the situational clarity scale was .78 for the weekly sample.

In addition to the quantitative measures, *open interviews* with mentors and mentees were used to enable more profound understanding of the mentorship interaction. Interviews allowing access to the cultural contexts of individual behavior provide a direct way to understand the meaning and interpretation of behavior (Shkedi, 2003). In total, I interviewed 37 (18 mentors and 19 mentees) participants, some of them were not included in the quantitative part of this research, mainly because the mentorship period was over or about to end. All interviews took place at the investigated organization in a quiet conference room and lasted 20-80 minutes. Because of the small size of the research sample, interviewing all the participants was manageable. The interviews yielded both a commitment on the part of the participants to the research process and qualitative data on the unique relationship in each dyad from the perspectives of both the mentor and the mentee. Relevant questions were:

what does a meaningful mentorship consist? What are the outcomes of such relations from both perspectives, what works to the benefit of both sides?

It is important to note that this combination of quantitative and qualitative methods does not mean that I ignore epistemological differences between the two methodological approaches and in particular their different criteria to test validity and reliability (Guba & Lincoln, 1998). The use of face-to-face interviews in this study is intended primarily to complete the quantitative data. Indeed, in some cases, I conducted 2-3 short interviews with the same mentor/mentee. For example, in one case where the individual quantitative data showed extreme fluctuation, I set up an additional interview to learn from the mentee, what the reason for these fluctuations was and how he would summarize his mentorship experience.

All the interviews took place during the period of the data collection, thus each interviewee (mentor/mentee) shares his story and/or perspective at a different point of time in the mentorship process. The majority of the interviews were taken before the quantitative measurement.

### ***Design and Procedure***

I designed a multiple-baseline study employing a maximum of 13 points of observation that were spread over three months – one observation per week. Each Dyad was assessed up to 13 times. General phases in mentoring process using Kram (1983) are:

- i. Initiation - formation of mentoring interaction (1<sup>st</sup> month)
- ii. Cultivation (2<sup>nd</sup> month)
- iii. Separation – becoming peers, in some cases friends (last month onward)

During the first phase, each dyad filled out a pre-questionnaire about the mentoring relationship as experienced by both mentor and mentee (See Appendix 4.1, 4.2). Each role (mentor/mentee) received a different questionnaire and a personal code to match the dyadic data. Afterward, only the mentees filled out the weekly

questionnaire (See Appendix 4.3). They each did so up to 13 times, with the questionnaires containing the scales for measuring responses to specific meetings. During the period of data collection, we used two interventions: First, a listening training was delivered to half the mentors in the sample; the training was delivered before the beginning of the weekly measures and after the pre-questionnaires were filled out. The mentors who participated in the listening workshop were randomly selected. The second intervention consisted of short ‘tips’ for the mentors, delivered weekly via email<sup>10</sup>. A total of 4 tips were sent during the last month of the research. Both interventions intended to improve the quality of the mentorship by increasing the mentors' knowledge of and capability in listening. Also, all the mentors receiving the tips got emails ahead of time with the following introduction: “Dear Mentor, Thank you for your cooperation! We have reached the final stretch of the study; from now on you will receive short weekly ‘tip’ emails to help you put the most effort you can in helping your mentee. Also attached is a summary of the listening workshop that took place a long time ago in which some of you participated. In the third section you will find a summary of how we measure listening. This is part of the indicators on which this study is based, and it could help you in noticing your listening behavior and in improving it so as to achieve better consequences for your mentee.”

### *Analyses*

A repeated-measure design was used with multi-level modeling (HLM) for change. This is the approved method for studying the effects of time and change. Indeed the data set contains the longitudinal data necessary for studying change (Singer & Willet, 2003) and requires specific statistical models of mixed models. Level 1 describes how each mentee changes over time, and level 2 describes how these changes diverge across mentees (Bryk & Raudenbush, 1987; Rogosa & Willett, 1985 in Singer & Willet, 2003).

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<sup>10</sup> See index 5 for all 5 weekly tips were sent



## Results

### *Quantitative results*

Table 2 presents the means, standard deviations, unconditional Intra-Class Correlation (ICCs), and inter-correlations among variables measured in the set of the mentees.

**Table 2:** *Descriptive statistics*

Variable	Mean	SD	ICC	1	2	3	4
Role Clarity	8.25	1.00	0.28	(.77)			
Role Confusion	3.31	1.87	0.51	-.49**	(.84)		
Situational Clarity	7.97	1.97	0.29	.21*	-.29**	(.78)	
Listening	7.81	1.85	0.54	.37**	-.34**	.67**	(.99)

Note. \*  $p < .05$ ; \*\*  $p < .01$  (2-tailed); N=128 mentoring episodes; Numbers on the diagonal are Cronbach's alphas.

The ICCs suggests that there is relatively consistency across the weeks of observation with regard to all study variables, in particular for listening and confusion. The high values of the ICCs (which are cross-weekly variances explained by differences among mentees) suggest the need to use HLM.

Since the data collected for this research is **longitudinal**, I used several descriptive statistics to explore the change over time (Singer & Willet, 2003). Figures 1.1-3.2 below, present descriptive analyses of individual change over time in role clarity, confusion, and listening. The graphs are empirical growth plots summaries of individuals change over time.

Figure 1.1 presents the individual change over time in **listening**; this graph shows that for most of the mentees the level of listening they experienced from their mentors remained stable throughout the study period, although five mentees experienced fluctuating levels of listening: three mentees (1, 13, and 16) experienced

a decline in listening, and two mentees (4 and 15) experienced an upward trend in the level of listening.

**Figure 1.1:** Empirical Growth Plots, OLS (Ordinary Least Squares) trajectories: summaries how individuals changed over time in *listening*

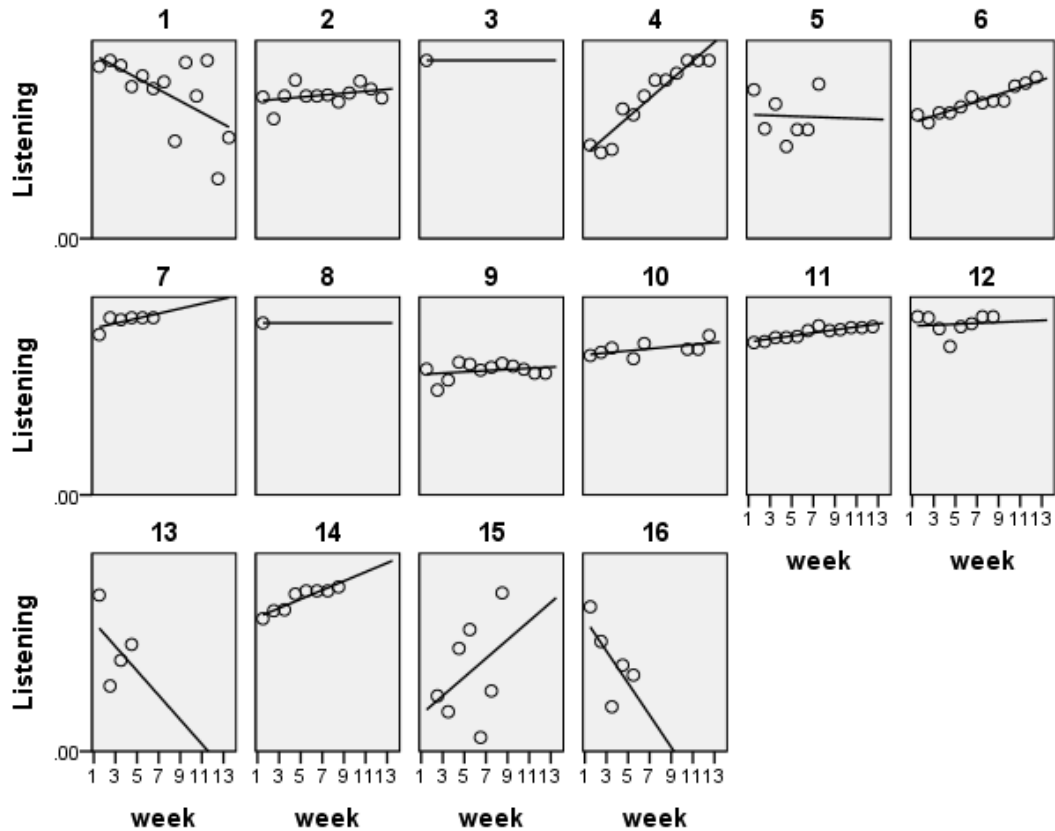


Figure 1.2 presents the average change of the entire group in listening for the duration of three months. This graph allows comparison of individual subjects to the entire group. It seems that at the level of the entire sample, listening begins in the upper third of the scale and there is a general upward trend. In relation to other variables (see below), the average level of listening seems to fluctuate without a clear direction. This fluctuation combined with the high ICC suggests both that the experience of listening has a fixed component, peculiar perhaps to the listening abilities of the mentor and the quality of the relationship in the dyad, and that on top of these fixed qualities the experience of being listened to by the mentor varies, perhaps randomly, from one meeting to the next.

**Figure 1.2:** Examining the entire set of smooth trajectories for *Listening*, An average change trajectory of listening for the entire group.

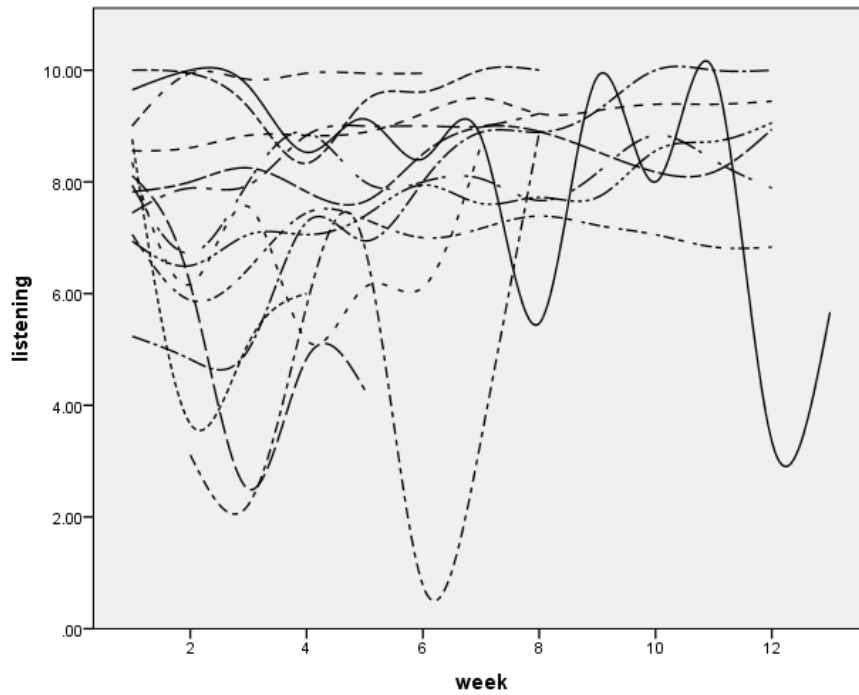


Figure 2.1 presents the individual change over time in **clarity**, which shows a general trend of either increase or relatively stability in **clarity** over time for all mentees, except two (1, 16) who reported a decline.

*Figure 2.1: Empirical Growth Plots, OLS (Ordinary Least Squares) trajectories summaries of how individual change over time in clarity*

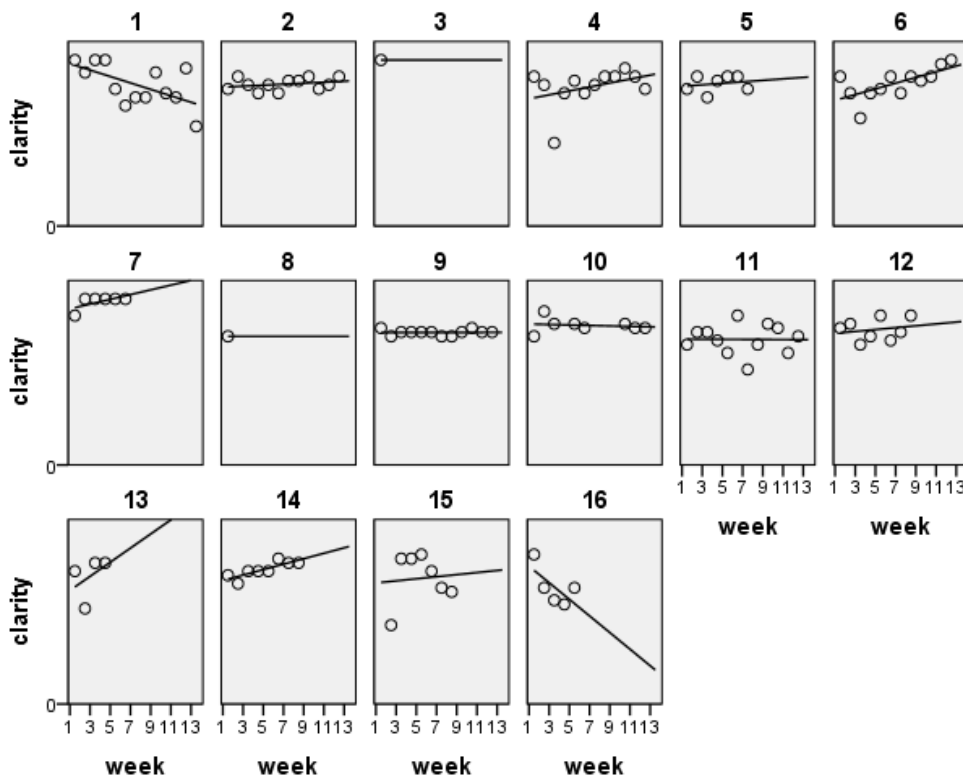


Figure 2.2 presents the average change of the entire group in role clarity, which allows for comparison of the subjects to the entire group. This graph suggests that the average change in the level of clarity that mentees experience in their new role is not linear. In general, it seems positive but with modest increases of 1-2 points (from 7 to 9). The minimum role clarity reported starts at 5-7 points in the group, a figure that is relatively high. In general, most of the mentees are located in the upper third of the clarity scale.

**Figure 2.2:** Examining the entire set of smooth trajectories for **clarity**. An average change trajectory with respect to **clarity** for the entire group

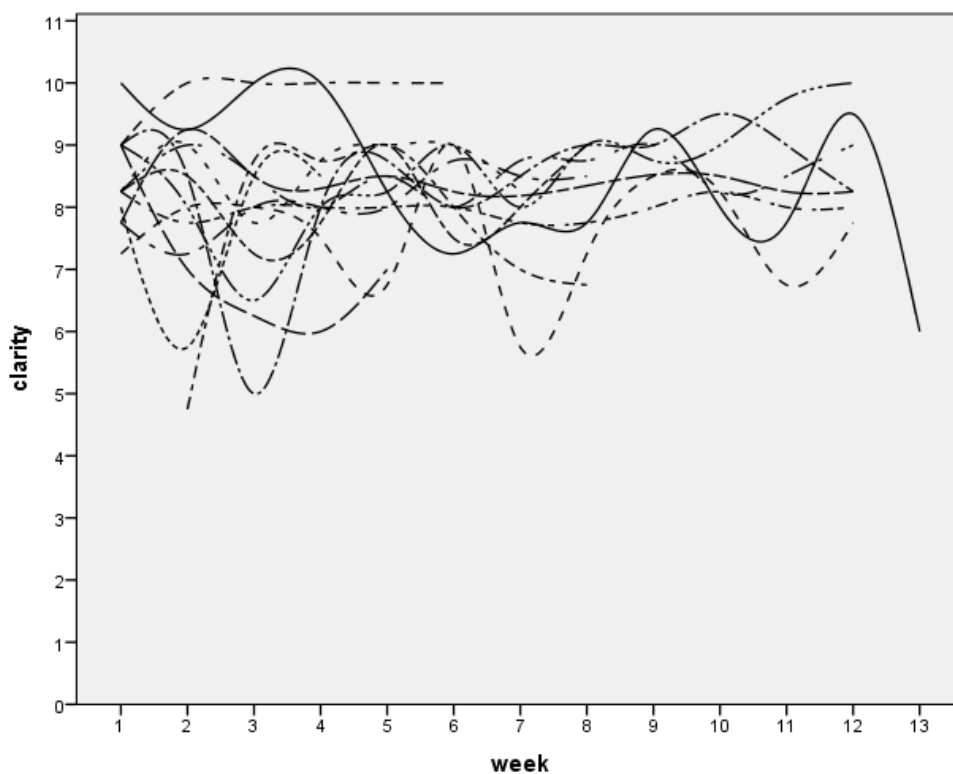


Figure 3.1 presents the individual change over time in **confusion**, which complements the results on role clarity presented above. In general, there is an opposite trend from results on clarity, which would indicate a decline in role confusion over time. More than half of the mentees showed this decline. But it is not necessarily linear and varies among mentees<sup>11</sup>.

**Figure 3.1:** Empirical Growth Plots, OLS (Ordinary Least Squares) trajectories: summaries of how individual change over time with respect to **confusion**

<sup>11</sup> For example, the case of mentee 1, similar to clarity, shows many ups and downs along the time

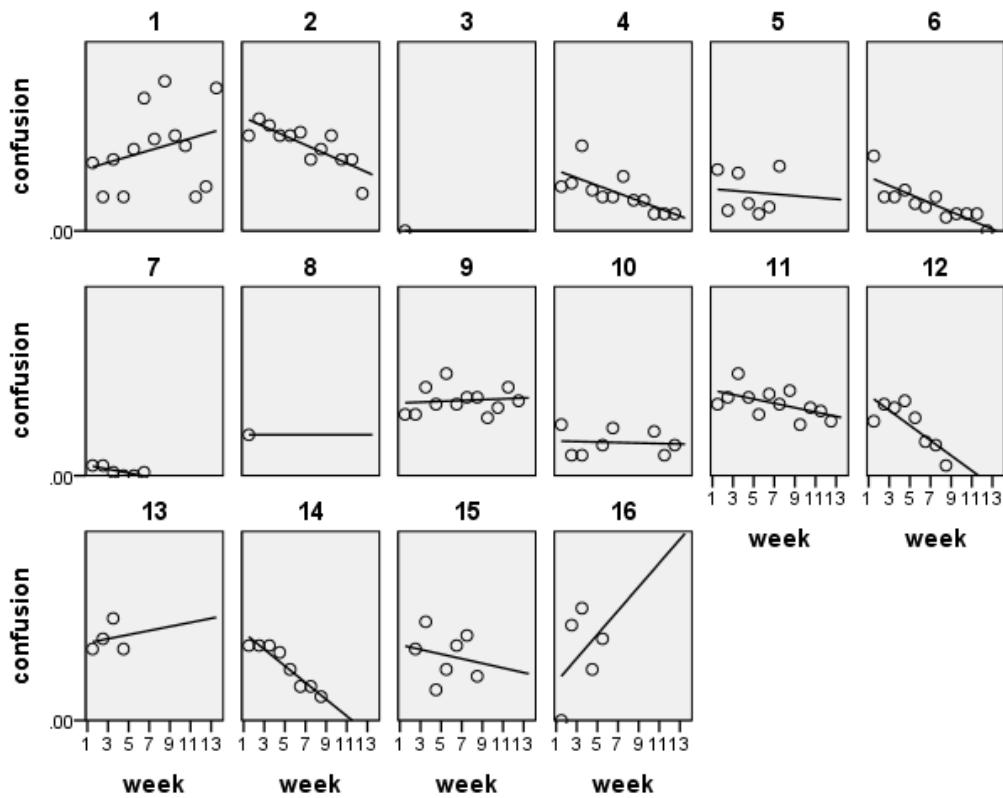
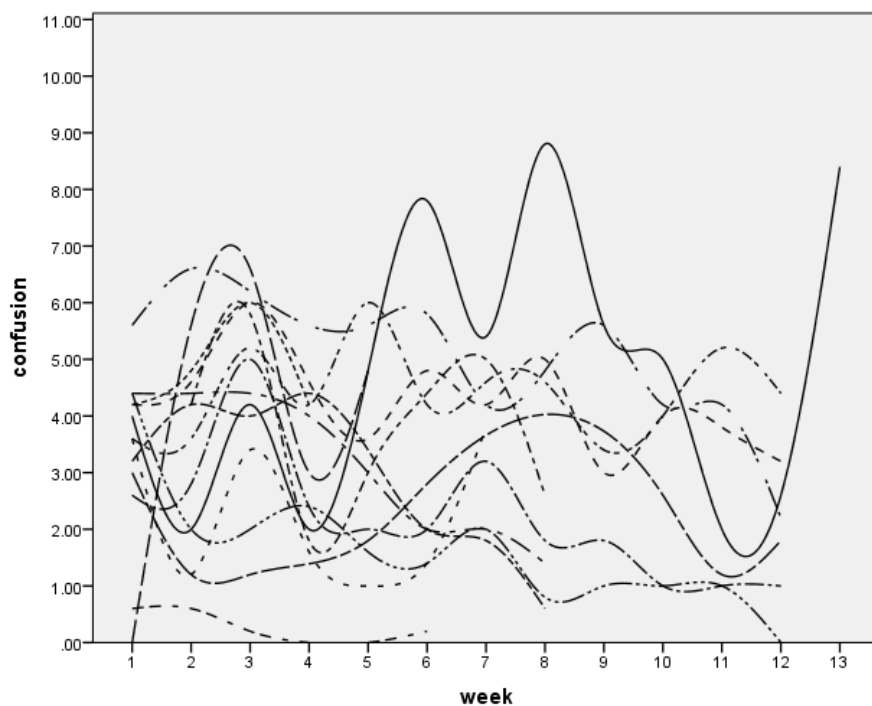


Figure 3.2 presents the average change of the entire group in confusion. This graph suggests that the average change in the level of role confusion is not linear with a large heterogeneity among the different mentees. However, the graph shows an overall decrease of 2-4 units.

**Figure 3.2:** Examining the entire set of smooth trajectories for *confusion*. An average change trajectory with respect to confusion for the entire group



*Hypotheses test*

To test the hypotheses with HLM two modifications were done to the predictors. First, the first week was coded as week 0, so as to make the intercept indicate the level of the dependent variable at the onset of the study. Similarly, the variable of listening was person-centered to create meaningful HLM estimates of the intercept (e.g., estimate of clarity when listening was average). In addition, for each person, I calculated the mean listening across all meetings. This served as a Level 2 measure of listening.

The result of the HLM model (See Tables 3-5 below) suggests that situational clarity is the outcome variable most affected by listening. Although situational clarity did not improve with time, it is nevertheless strongly associated with quality of listening. Both, within a person (.64); meetings with better listening are associated with greater situational clarity and between mentees (.76); mentees who report having a better listening experience with their mentors across all meetings, report higher situational clarity. Yet, the estimates of variances suggest that the change over time and the effects of listening vary greatly among mentees.

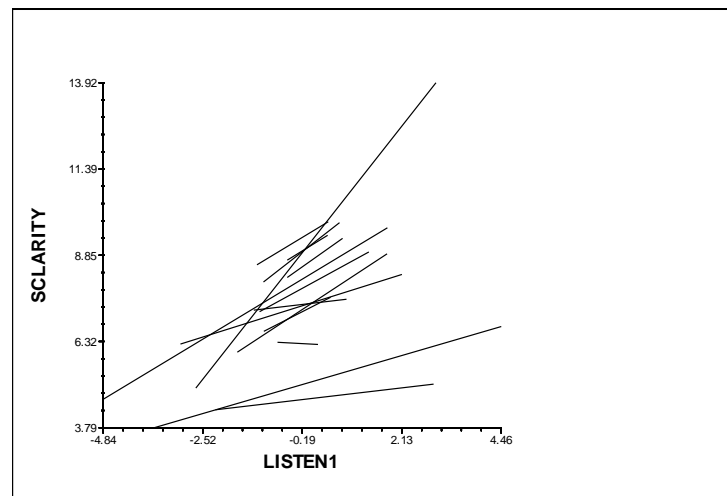
**Table 3:** The effect of time & listening in each meeting (level 1) and listening average (level 2) on situational clarity

Fixed Effect	Coefficient	Standard error	t-ratio	Approx. d.f.	p-value
Intercept	7.76	0.36	21.26	14	<0.001
Week	0.03	0.13	0.23	15	0.82
Listening at Level 1	0.64	0.17	3.69	15	0.002
Listening at Level 2	0.76	0.13	6.05	14	<0.001
Random Effect	Standard Deviation	Variance Component	d.f.	$\chi^2$	p-value
Intercept	1.42	2.02	12	54.48	<0.001
Slope of week	0.09	0.01	13	15.49	0.277
Slope of listening	0.41	0.16	13	21.53	0.063
Level 1 error	1.11	1.23			

Figure 4 below presents the predicted situational clarity for individuals by listening. It suggests that despite the variance in slope (the degree of relationship of situational clarity with respect to listening for each mentee), the relationship is largely positive for most mentees. Indeed the data in this study support hypothesis (c): both weekly and overall listening are significantly positively correlated with situational clarity. For each increase in one unit of listening in a specific session, the situational clarity increases by .64 (level 1), and for each increase in one unit of average listening across all meetings (Level 2) situational clarity increases by .76. For example, in the regression equation for situational clarity – Situational clarity =  $7.76 + 0.76 * \text{listening}$  – in the case where the mentor listening rated low 2 (= -3 after centered manipulation) the predicted situational clarity is 5.48, whereas in a different

dyad where the mentor listening was rated high, for example 9 (= 4) the predicted situational clarity is 10.8.

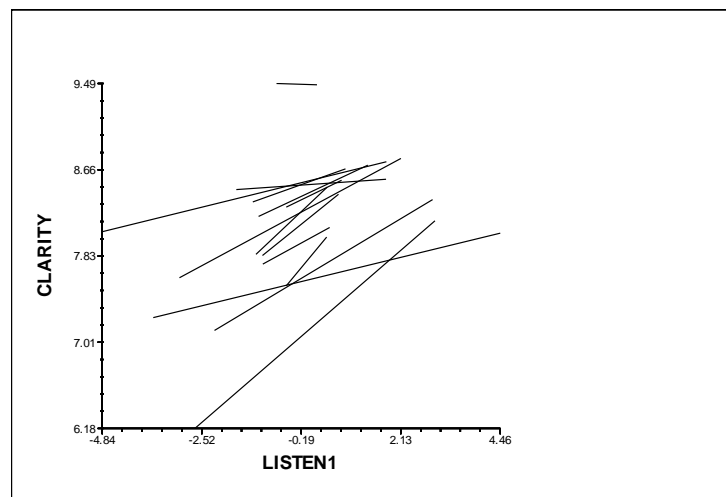
**Figure 4:** Individual regression lines, regressing situational clarity on listening



**Table 4:** The effect of time & listening in each meeting (level 1) and listening average (level 2) on role clarity

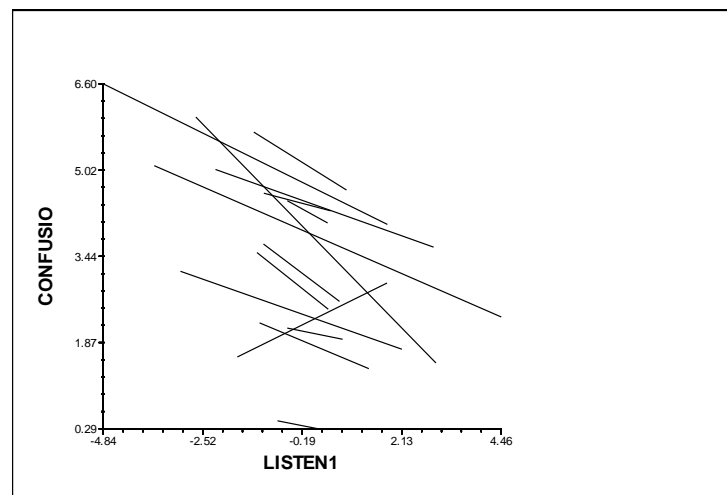
Fixed Effect	Coefficient	Standard error	t-ratio	Approx. d.f.	p-value
Intercept	8.30	0.18	46.96	14	<0.001
Week	0.00	0.03	-0.06	15	0.951
Listening at level 1	0.22	0.08	2.59	15	0.02
Listening at level 2	0.29	0.08	3.45	14	0.004
Random Effect	Standard Deviation	Variance Component	d.f.	$\chi^2$	p-value
Intercept	0.48	0.23	12	24.05	0.02
Slope of week	0.05	0.00	13	17.57	0.174
Slope of listening	0.17	0.03	13	21.56	0.062
Level 1 error	0.81	0.66			



**Figure 5:** Individual regression lines, regressing role clarity on listening**Table 5:** The effect of time & listening in each meeting (level 1) and listening average (level 2) on role confusion

Fixed Effect	Coefficient	Standard error	t-ratio	Approx. d.f.	p-value
Intercept	3.39	0.41	8.36	14	<0.001
Week	-0.09	0.05	-1.83	15	0.087
Listening at level 1	-0.32	0.17	-1.93	15	0.073
Listening at level 2	-0.43	0.23	-1.87	14	0.082
Random Effect	Standard Deviation	Variance Component	d.f.	$\chi^2$	p-value
Intercept	1.42	2.02	12	54.48	<0.001
Slope of week	0.09	0.01	13	15.49	0.277
Slope of listening	0.41	0.16	13	21.53	0.063
Level 1 error	1.11	1.23			

**Figure 6:** Individual regression lines, regressing role confusion on listening



Similar results were also found for role clarity and confusion as presented above in Tables 3 and 4. Listening is strongly associated with role clarity (Table 3). Listening improves the role clarity of the mentee, both within a person (meetings with better listening are associated with better clarity about how the mentee feels in his/her new role) and between mentees (those mentees who on average report having a better listening experience with their mentors, across all meetings, also report higher clarity in their new role). As per the other side of the coin, the association of listening and confusion is strongly negative (Table 4). Listening decreases the state of confusion both within mentees (meetings with better listening reduce the confusion the mentee experiences in his/her new role) and between mentees (mentees who experience better listening episodes with their mentors across all meetings, report lower confusion) (using a one-tailed test). Indeed, the data also support hypothesis (a) and (b).

Table 6 below presents the percentage of the explained variance for each outcome variable by listening<sup>12</sup>. Results show that accordingly to the main effects presented in the HLM results, situational clarity is the outcome variable most affected by listening in relation to the others; 30% of the variance in situational clarity is explained by listening. Indeed it seems that the experience of listening has a greater

<sup>12</sup> The percentage of explained variance was calculated by dividing the difference of the estimated residual of the empty models from a model including listening, by the estimated residual of the empty model.

effect on short-term experience of the sense of clarity than it does on the general effect of role clarity.

**Table 6:** *Percent of variance explained by listening*

outcome variable	variance explained by listening
Role clarity	10.7%
Role confusion	20%
Situational clarity	30%

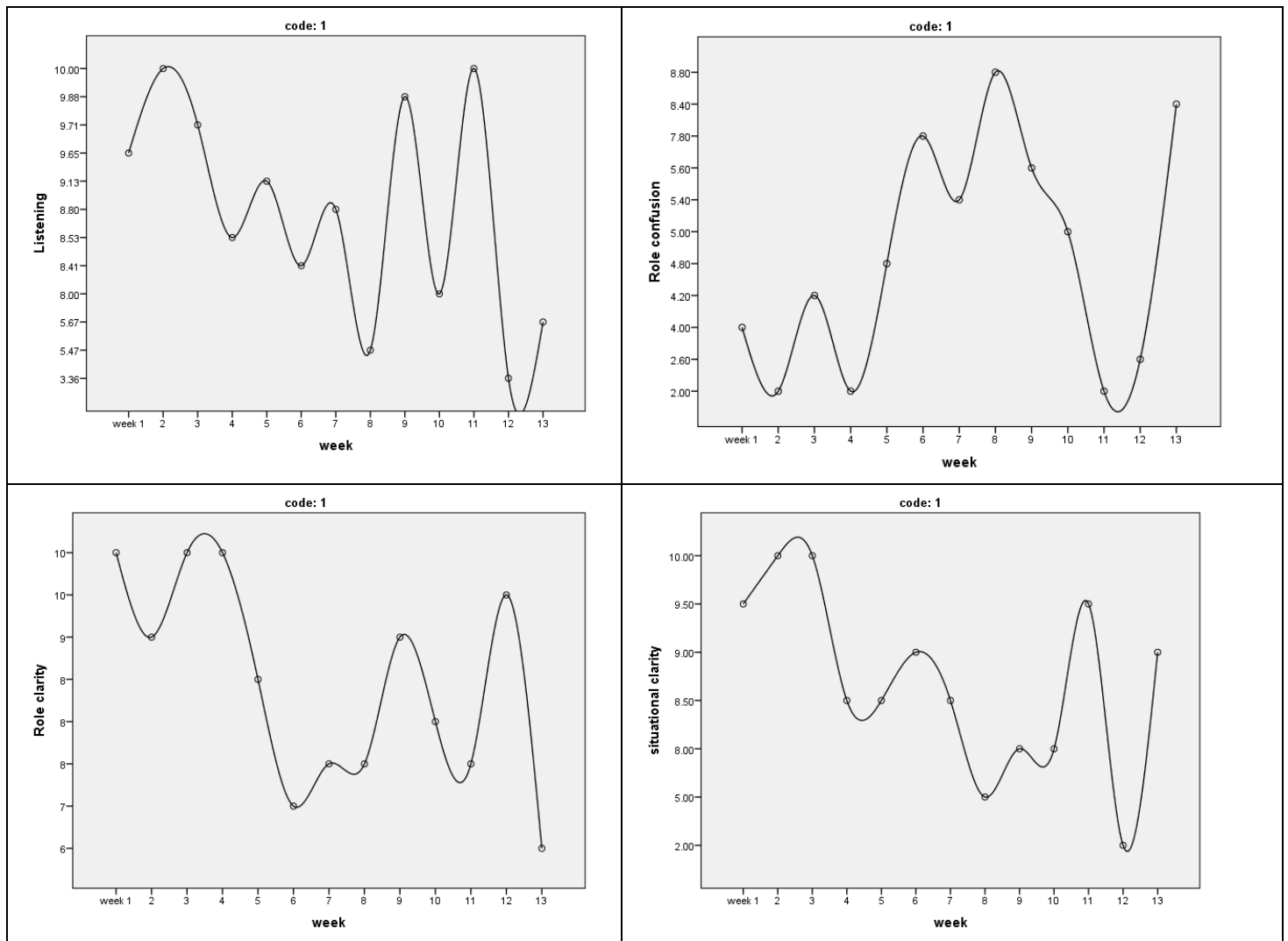
### *Qualitative results*

#### **The story of Yuval & Oren<sup>13</sup>**

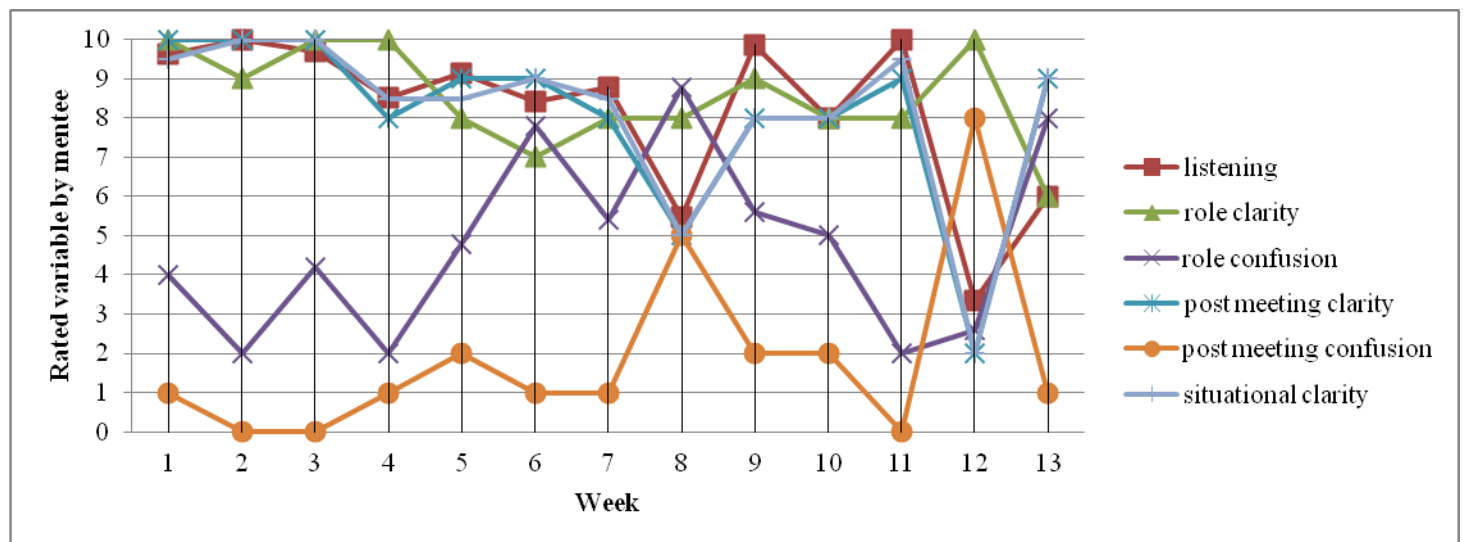
To enrich the understanding of what a quality and meaningful mentorship experience consists, I choose one dyad (Dyad 1) as a case study in which to more deeply probe the mentoring relationship developed between Yuval (mentor) and Oren (mentee). Dyad 1 was chosen for two reasons. First, they had the biggest ups-and-downs in their relations in the measured variables. Second, after interviewing all dyads, particularly after two with Yuval and two with Oren, it seems that this dyad experienced the most meaningful adventure in mentorship. Below are the quantitative and qualitative data collected from Dyad 1.

<sup>13</sup> Yuval and Oren are fictive names used to keep confidentiality.

**Figure 7:** Smooth spline summaries of how Oren changed over time in all 4 variables: Listening, Role confusion, Role clarity and situational clarity



**Figure 8:** Combined summary of the development of all 6 variables over time: Listening, Role confusion, Role clarity and situational clarity (split to post meeting clarity and post meeting confusion)



Figures 7 and 8 allow detailed analysis of Dyad 1. Figure 8 shows an almost complete correlation between listening and situational clarity (the light purple line and the red line almost merge, see at Figure 8 above)<sup>14</sup>. This correlation is consistent with the HLM results linking listening and situational clarity for the entire sample. However, it seems that the correlation between listening and role clarity is a bit lower. For example, in Week 12, Oren reported an untypically poor listening experience (3), poor post-meeting clarity (2) and high confusion (8), but still reported high role clarity (10). Specifically, the first seven meetings were rated consistently high in listening (8.4-10), and the lowest scores were observed in Week 8, 12 and 13. This distribution of listening over time may have meaning for the effects of listening on role clarity. Perhaps the good listening experienced at the beginning of the relationship created a strong foundation for a trusting mentorship such that, while poor listening in later meetings decreased the situational clarity, it did not affect the more general assessment of the already established role clarity<sup>15</sup>. Indeed, I argue in the discussion that this can be explained by a compositional effect.

To understand part of the above issues and the mentoring relationship, below are some quotes from the perspective of both Oren and Yuval.

*From the mentee point of view:*

The lower results I reported in the 2 recent weeks are the outcome of circumstance - the 'floor' was 'shaking', which emphasizes the difference between training and a war. The expectation from me is to stop being a specialized / trainee and to become an engineer... Sometimes you have to 'beat up' and Yuval [my mentor] is a person that knows how to beat up – he is 'Karate' ... He is a 'caliber' and I love him! It's not at all easy to be a new engineer at XXX [the company name], if I did not have the coaching of Yuval, for sure I would go back to my old job, to my comfort zone, but Yuval made it challenging. For sure that if I did not have that soft substrate I landed on, I was in somewhere else! ... When Yuval was angry, it increased my motivation also because we are peers ... He was tolerant, it gave me a really good feeling! ... In the case of the mentorship with Yuval I wanted to be like him and it was a mutual desire, our agreement was 'You will raise me and you will have freedom.' I have this need to be good at what I do, to fulfill my potential.

Almost no one in our work received a personal touch from him, the mere fact that I got it, made me know we were like family. I felt he was watching over me ... Always talking to me

<sup>14</sup> Please note that situational clarity is an average of post-meeting clarity and post-meeting confusion see in page 19

<sup>15</sup> Although in week 13 observed the opposite case. Poor listening (6) converges with low role clarity (6) but high situational clarity (9)

patiently ... He **understands me** ... Always gives me his advice... always knows how to give me the both sides of the coin... He's just a special person, I think I won... that's for sure! ... Yuval has the character of a commander, there are situations where he would say to me, **'Listen you do one, two, three** ... Under stressful conditions it is good ... Always good when you have a mentor who is a leader, even when you are confused, even if you are not 100% clear when you leave the meeting, you do not know why, but you know you did the right thing! This happens when there is no time at work and it connects well to the period when Y left [senior engineer who came to Israel to be a professional mentor for a new technology]... I tried to learn from his accuracy in listening... which means for example, after a half an hour during which a manager yelled at him, he came back to me as if nothing had happened. And the opposite, there are situations when he is most calm and yet he does not give any room for listening.

I am very emotional, and he is not; He is a buffer, which is awesome! I asked him about it; it's a skill they are learning. As an engineer there is an element of management, mostly professional with the technicians, and the differences between the technicians is crazy. I tell my mentor, I want to be like you one by one, you are a 'supergun', then we have conversations about management and this is a real privilege, we do not have an ego, I tell him listen to me, it's hard for me, I cannot go to this man and he will give me the solution.

*From the mentor point of view:*

It seems that Yuval was proactive and knew how to take advantage of learning opportunities – “If I see something I think is good, and Oren is present I call him over so that we can sit together... I ask him to work with me.” Yuval tried to adapt himself to his mentee, step into his shoes and understand Oren's needs – “I'm really trying according to my understanding [to ensure] that the process he goes through fits him well both professionally and emotionally.”

The case of Yuval & Oren demonstrates that **personal relations** may be the basis for a meaningful mentorship experience. The personal relations developed between the two enables the quality listening. This sense of personal relations is reflected in Oren's statement “... [I] receive a personal touch from him, the mere fact that I got it, made me know we were like family. I felt he was watching over me ...” The personal relationship between the two is also expressed by affection – “He is a 'caliber' and I love him!”. The effect of personal relations and affection also emerge from interviews with other dyads in which the mentorship was perceived as meaningful.

## Discussion

The results are consistent with the research hypotheses. First, the results show that mentor **FL is positively associated with mentee clarity** (both regarding one's role and one's sense of situational clarity), and negatively with mentee confusion. Second, the results suggest that **the strongest association is between FL and situational clarity**. Moreover, all the hypothesized associations were stronger at Level 2 in absolute value, relative to Level 1. This may suggest a **compositional effect**. That is, the presumed beneficial impact of FL appears to aggregate across meetings, such that good FL in one meeting spills over to general clarity and confusion across the other meetings. Third, the story of Yuval and Oren (Dyad 1) demonstrates the compositional effect and emphasizes the importance of **personal relations** in producing a meaningful mentorship experience. Fourth, although mentor FL was associated with all the dependent variables, there was evidence for improvement across **time** only in role confusion, which significantly decreased across time (using a one-tailed test). Below I discuss each of the four observations.

**First, the positive association of FL with clarity** found here is consistent with a cross-sectional study (Lloyd, 2012) which also found significant positive association between listening and self-clarity ( $r = .39$ ). Although Lloyd (2012) used a different measure of clarity<sup>16</sup> our results converge and increase the confidence in the findings. Also Dolev & Kluger (2011) found that the subordinate's experience of feeling understood is strongly correlated to supervisor listening. Feeling understood may explain one mechanism for the impact of listening on situational clarity. Feeling understood means feeling that the listener has a clear understanding of the speaker's opinions, intentions, and feelings (Dolev & Kluger, 2011). Those aspects of feeling understood may cause the sense of self-clarity. Feeling understood by a significant other makes the individual better understand him/herself so as to rebuild inner

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<sup>16</sup> Consisted of 6 items prefaced "when my partner listened to me": "I got clear picture of who I am", "I learned more about myself", "my thoughts become clearer," etc.

communication (Rogers, 1951) and a better sense of self-clarity. Feeling understood was also found to mediate the effects of FL on well-being (Dolev & Kluger, 2011). Sense of clarity also was found to serve as a key mediator of the effect of FL on wellbeing (Lloyd, 2012). Lloyd (2012) concludes that listening quality promotes the extent to which individuals experience sense of clarity and this in turn predicts the extent to which individuals feel better (Lloyd, 2012). The current findings seem to suggest that such effects of **wellbeing** may also be found in the mentoring context -- an issue that deserves further research.

**Second, the difference in the effects of FL on situational clarity as compared to role clarity** may shed light on the micro processes linking FL and clarity. Specifically, FL had a stronger association with the *situational clarity* the mentee experienced after each session with his mentor ( $\gamma=.64$  at Level 1) and a weak association with *role clarity* ( $\gamma=0.22$  at Level 1). This may suggest that FL has a stronger short-term effect on situational clarity, but a weak, slowly accumulating effect on the more general role clarity. If this be the case, FL may be an investment that yields strong short-term effects, but needs to be sustained across time to impact role clarity. Another explanation related to the **compositional effect** may be suggested. The compositional effect is evident in the case of Yuval and Oren, where in the last weeks a negative correlation appeared between the poor listening of Yuval as differentiated from the high rated role clarity of Oren. The immediate impact of the poor listening of Yuval was reflected only in Oren's situational clarity (2). Indeed, the differences between the effects of FL on situational clarity as compared to role clarity may be explained by the short- vs. the long-term effects of listening. The short-term impact of listening is reflected in situational clarity, whereas the long-term impact of listening is reflected in the compositional effect of listening on role clarity. This means that in this dyad where the first mentoring sessions all contained quality



listening, the last weeks also have a positive impact (compositional effect) upon the dependent variables, regardless of the quality of the listening in the later sessions.

Also note that, the short- vs. the long-term effects of FL on situational/role clarity may be related to broader constructs used in the theoretical review of uncertainty and ambiguity. Studies report connections between low role clarity and different stressors variables at work (Panaccio & Vandenberghe, 2011; O’driscoll & Beehr, 2000), such as role conflict, work overload, role ambiguity, dysfunctional organizational climate (Allen *et al.*, 1999) etc. Hall (2008) determines that a high level of role clarity enables employees to act better and to be more determined in situations of ambiguity. Indeed, if Aggregation of FL increases role clarity, these may in turn increase greater competence in handling ambiguity. However, ambiguity is a separate construct from clarity vs. confusion. It was neither measured nor captured in the current study. It may be desirable to focus on these constructs in future research in order to further explicate the effects of FL.

**Third**, the importance of **personal relations** emerged in the story of Yuval and Oren, shedding light on the understanding of the compositional effect of listening on individual clarity. Aggregate episodes of listening in a relationship impact on more general variables such as role clarity. Aggregate listening may coincide with the development of a personal relationship that creates a platform for **trust** (Lloyd, 2012) and safe connection. Hackenbracht & Gasper (2013) explain this understanding in their finding that people are more motivated to listen to emotional disclosure because it fulfills their need to belong. Indeed, where there is more listening, there is more emotional disclosure and so greater potential for personal relations to develop. Gregory & Levi (2011) also find personal relations to be the key factor for quality mentoring as perceived by mentees. Gregory & Levi (2011) find that attention to the mentee's personal needs, genuine interest on the part of the mentor, encouragement for open communication, and empathy and trust were the main factors in a successful mentoring process. Those findings converge with the findings of Hackenbracht &

Gaspar (2013) and the current research that demonstrates that listening is the root cause for quality mentoring.

**Fourth**, the reduction in confusion across **time** may reflect natural improvement unrelated to the mentoring process. However, the strong effect of listening relative to the effect of time suggests that the mentor's behavior strongly impacts mentee clarity. The lack of any significant effect of time on both clarity measures raises the question of whether the mentoring "works". Yet, once again the strong effect of FL seems to suggest that mentoring effects are not linear with time, but rather with the results of the aggregated experience of FL.

### **Limitations**

The use of FL measurement in this research excludes other aspects of listening such as *directive*<sup>17</sup> listening. Specifically, FL is built mainly on the 'Rogerian' perception of listening and focuses on the active, emphatic, and facilitative aspects of listening. The characteristics of the population in this research reveal another missing aspect in the use of the FL scale of **directive** listening. The directive aspect in the perception of listening emerges from the qualitative results which emphasize a discourse of professionalism, along with attempts to downplay expressions of an emotional/psychological character. This observation is reflected both in the context of the population of engineers and in the context of the organization where mentoring is perceived as mainly fulfilling a career development function and less a psycho-social function (Kram, 1983). The premise of FL is to benefit the speaker; therefore, the effectiveness of listening is determined by the speaker (in this research, the mentee) and depends upon the goal of the speaker (Horowitz et al, 2001).

If the speaker's goal is to get information about a problem then a **directive response is effective**. The protégé expects a mentor to be directive. As the mentors fulfill expectations, protégés gain the needed information about how to fit into the organization. **Directive listening** helps protégés learn about the organization,

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<sup>17</sup> Examples of items that measure directive listening are: "My mentor shared his personal experiences and perspective." "When I have a problem my mentor offered an alternative perspective." "My mentor gives good advice about how to succeed in the organization." etc. (Young & Cates, 2011)

enabling them to fit in while retaining their individuality, and assisting them in finding their place. (Young & Cates, 2010, 218)

Indeed, some of the mentees in this study expressed exactly these needs:

What's significant to me is mainly the technical guidance at the beginning ... The professional training is very welcome, as much it is to **direct** what I need to learn and what not in the 'sea of information' ... I would like to have someone who is dedicated to teach; the first condition is that he be professional at work ... and knows how to deliver knowledge in a structured way for further career development.

Especially most important to me is the OJT (on the job training) on the tool. Practical learning on the tool, to be close to him, I want everything he does to be explained to me.

I have difficulty with emotional questions. The main job is to acclimatize professionally, taking care of the training, and not intimate conversations.

It is very helpful to me that he is very strong, many years at XXX [the organization]; he began as technician, so he has a lot of experience and knowledge of the tools from the inside. .. My peers fill in for me the function of the 'soft' things. We 4 new engineers were recruited together, and we cover for each other and help each other. We have developed a good relationship, so that it does not necessarily follow that I go to X [my mentor] if I have a personal problem. We are a very interrelated group.

From the mentor's perspective a similar perception appears, which reflects the focus on their professional function, and accordingly, **directive** elements in listening are perceived as more beneficial:

Here as an engineer you get your tool, but it is far above, you need to be working with the 'whole world' that is indirectly related to the tool, to work against the world and this makes the young engineer get lost. This is the role of the mentor – to **direct**. There is no course that can teach this thing, that's why you have the Mentor. When I joined XXX [the organization] there was an Engineering School, it is difficult to link a course to a job, because of this there is mentor. To mentor the young engineer means to connect the theory and the practice of the tool. It means to assist the young engineer in finding his own right priorities.

Especially important for me as a mentor is the positioning of her role, such that she will not be one more engineer... that she will be a professional in our field of expertise, so people will want to contact her. That she will be esteemed and recognized, even if she is difficult and not a 'yes-man', still everybody will consider her as someone you love to work with. For me this is professionalism, and that's why it's important to me.

Here listening has nothing to do with it, maybe patience, listening perhaps is relevant to children or to my husband... Listening here is less appropriate.

When it comes to specific information about the tool and connections, this is the place of the mentor here, to go over a, b, c. There is also a training package for an engineer: what he needs to do to become a good engineer, steps he should quickly surmount. The mentor instructs the new employee with what to start with, not always the mentee knows... It is also something that I worked on with her. I believe that if we continue to meet, she will be the 'on call' engineer and I will be doing the coaching... The third phase is the professional qualifications.

It is very important for me that my team be strong in terms of knowledge and how others in the organization perceive us. We have four new engineers, which lowers the expertise of the group. Is it very important for us to look professional, and this is where the role of the mentor comes in.

Indeed, it seems that if we had also used an element of directive listening under the FL scale, the results could provide better understanding of the specific effects of listening. In addition, the listening measurement was fitted to the perception of listening and the needs of the investigated population, both the mentors and mentees.

A second limitation of this research is the **small sample size and sample characteristics**. To increase the confidence in the research results it may be desirable, both to enlarge the sample size, both with regard to more dyads and to more observed meetings for each dyad, and to enlarge the scope of the sample to include more diverse populations/organizations. The organizational culture of the specific organization investigated is based on striving for clarity and conformity. Those characteristics may be expressed in the research results that were all of similar value. It may be that the effects of FL in the organization studied here were constrained by its cultural emphasis on orderliness, which may reduce ambiguity, making the role of FL less important. What the outcomes would be in other organizations where the culture/population (not engineers) is different, is a matter for future investigation.

A third limitation is the **non-experimental design** of this research. To increase confidence in the research results, it may be desirable to design experimental tests of situational effects of listening on the individual. In such an experiment, it is desirable to probe which element in the listening complex (emphatic, active, directive) creates the sense of clarity.

A fourth limitation is the use of only **one kind of mentoring relationship** (traditional - experienced senior employee mentoring a newly hired, young employee). It would be interesting to examine the effects of listening on other forms of relationships such as manager-employee mentoring, etc., and determine what form of mentoring works best?

## Future Research

Future research should ask several questions. First, **the effects of listening on wellbeing** was found to be mediated by the sense of clarity (Lloyd, 2012). Indeed, effects of wellbeing may also be found in the mentoring context. To what extent does mentor listening affect new employees' wellbeing? To what extent is the impact of listening upon the socialization process beneficial to organizations? Also it would be interesting to test variables aside from clarity that may mediate between listening and wellbeing, for example: self-confidence and self-efficacy. These variables can be especially important in the entry process of a new role, wherein a new employee builds a sense of competence, self-confidence and also professional identity.

Second, **what motivates people to listen at work?** One suggestion by Hackenbracht & Gasper (2013) is that listening is motivated by the need for belonging, but mostly among people that tend to be emotional disclosers. In the context of the workplace, this hypothesis may be interesting to observe, especially as it is raised as the first limitation in this research, where people appear to focus mainly on professional functioning and to repress psychological functioning.

Third, **what in the process of listening specifically creates self-clarity?** Theory and experimental research may specify this mechanism. It should specify how the different dimensions of listening — empathic, active, facilitating, directive — affect speaker self-clarity and whether these listening elements have an optimal sequencing (e.g., empathic first and then directive).

Fourth, what are the effects of **listening as a group variable?** This means measuring the effect of listening on all personal combinations in the group — mentor, manager, peers, etc. — and on broader variables such as group performance, facing ambiguity, creating new knowledge, etc. A major challenge will be to build an appropriate statistical methodology to examine the group listening variable.

Fifth, little attention was given in this research to the connection between listening and clarity to **uncertainty and ambiguity**. In the theoretical chapter (see pp.

11-14), I distinguished between concepts describing the psychological states of clarity/confusion and concepts describing broader social organizational states of uncertainty and ambiguity. To keep the study manageable I focused on role clarity. In the future, researchers may desire to observe the impact of listening on broader social organizational states such as coping with uncertainty, ambiguity in complex environments, and intensive stress<sup>18</sup>. Also future research may explain the mechanism connecting listening to situational clarity, role clarity and to ambiguity. Does an increase in self-clarity improve the ability to handle situations of ambiguity?

Finally, **is listening trainable?** In this research two interventions were used regarding listener training that weren't tested due to the small sample of mentors. Future research should focus on listener training in order to observe which training methods are effective in improving listening? In this research we used two methods. First we used an instructor-led workshop that included theoretical knowledge and three short practice exercises. Second, we sent four weekly e-mails with short tips during the mentoring process. For future research that will focus on the effects of training on listening, it may be desirable to plan an extensive training program that will include several methods that will employ different listening skills in order to test the effectiveness of training over time and to determine which training method is most effective. Note that current research (Ikegami *et al.*, 2010; Tatsumi *et al.*, 2010) suggests that specific listening behaviors (e.g., reflection) are trainable, but we do not know if those changed listening behaviors have any organizational effect.

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<sup>18</sup> This suggestion dovetails with the growing interest in recent organizational literature and among practitioners with issues of ambiguity and change. As change becomes a regular agenda item rather than an exceptional event in organizational life (Katz, 2012), the need to cope successfully with change and uncertainty becomes an important skill.

## Implications

Listening has significant beneficial effects for the new employee, mainly on situational clarity in the short-term and aggregate listening on role clarity in the long-term. Aggregate listening creates a trusting, personal, safe, and meaningful foundation for a relationship. These effects have direct implications for the wellbeing of a new employee. Indeed, a mentor's listening skill does matter for the socialization process of the new employee<sup>19</sup>. This study has specific implications for both the organizational unit that manages formal-mentoring programs and for the mentor. First, **organizations** should be much more selective in their choices of mentors. Eddy *et al.* (2001) report that most organizations choose experienced professionals, managers and executives, and in so doing focus on the professional function in their choice of who can mentor. The focus on professionalism is appropriate to the organization and the sample observed in this research. However, this research suggests that organizations should place greater emphasis on psycho-social functions in the mentoring process. The psycho-social function expressed in the mentor's listening skill is a crucial skill that predicts quality mentorship. To do this, organizations are required to equip mentors with appropriate tools to develop soft skills such as listening, and to provide them with training and professional assistance. Three key variables that may enable listening in organizations are drawn from Fromm's essay 'The Art of loving' (1964): concentration, patience, and serious intent.

First, **Concentration** is rare in our culture (Fromm, 1964), which appears is also true with regard to listening (Kluger, 2011). Our culture promotes a distracted lifestyle: doing many things at once, reading, talking, eating, drinking, sending SMSs, etc.<sup>20</sup> Fromm (1964, p. 89) suggests that the general approach characterizing the

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<sup>19</sup> Accordingly, in the modest sample of this research two opposite cases illustrate the importance of the mentor in the integration process for new role in the organization. In one case the function of the mentor was crucial for the new employee's desire to remain in his new role. In the opposite case, the new employee decided to quit after about 4 months in the organization because of serious dissatisfaction with his mentor and his training process.

<sup>20</sup> This is only strengthened with developments in technology which create a reality of overly available stimulation (The Smartphone revolution for example).

‘modern man’ is that he **lives in the past or the future, but not in the present**. Mentors encounter great difficulty in being concentrated in meetings with mentees due to their multi-tasking and overload of data/tasks in their jobs. Organizations (managers in general and mentoring-program managers specifically) should help employees to focus and to create priorities. If mentoring new employees is important, organizations should communicate it by freeing up time for mentoring, so as to enable the mentor to have the right focus and to concentrate on this process. In fact, the practitioner literature suggests that successful formal mentoring programs are based on the high-level support the organization takes. Communication and visibility are the most frequently used methods for showing this support<sup>21</sup> (Allen & Eby, 2011): “employees will be more committed to an initiative if they believe their leaders value it or [if they] see their leaders practice it” (pg. 346).

A second key variable is **patience**. Yet the current industrial methodology fosters the opposite: speed. All references to good mentoring experiences raised by mentees in this research mentioned the patience of their mentor as highly important. “I think patience is the most important character trait for mentor ... there is a lot of pressure here” “He is quite patient and never lets me feel that he was angry at me, or does not care, he has the patience to explain something twice, it’s important... I needed attention and the patience to explain something over and over again ....” As part of the selective process of who can mentor, organizations should choose mentors with high levels of patience.

A third key variable is **serious intent**, “if the art is not a matter of utmost importance the student will never learn it” (Fromm, 1964, p.97). To be a mentor is a choice. The first and necessary condition an organization should have is that only those employees with high intrinsic motivation, passion, and desire to be mentors be

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<sup>21</sup> Allen & Eby (2011) in their book collect additional ways for organizations to show their commitment to formal mentoring such as: reward systems, managerial bonuses, making the mentoring program part of the company’s overall employee/management development initiative, creating a philosophy statement around the mentoring program that links it to the organization’s mission statement.



selected for the role. The essence of mentoring is voluntary, since mentoring is pro-social behavior (Allen & Eby, 2011).

Last but not least, are the **mentors**, who can derive two main implications from this research. First, is to mentor with full concentration, patience and serious intent in general, and in the 1:1 meetings to listen in particular. Mentors should leave all distraction behind and focus their full attention on the mentee, making each meeting the one and only important thing at that place and time. Second, is to listen to one's mentees over time. A one-time event of listening may impact situational clarity while the aggregation of listening events may be an investment with lasting impact. Aggregate listening appears to allow for both building trust and personal relationships between mentors and mentees and for producing clarity and wellbeing in mentees.

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<http://medical-dictionary.thefreedictionary.com/mental+confusion>

## Appendices

### 1. FLS – Facilitating Listening Scale – Items

Item
1. Q117 Enjoy being listened to
2. Q118 Feel that s/he cares about me
3. Q126 Feel that it is easy for me to open my heart
4. Q122 Feel that I am a unique and valuable human being
5. Q123 Better understand myself
6. Q116 Feel that s/he is interested in me
7. Q111 Feel close to him/her
8. Q125 Feel comfortable
9. Q119 Feel a sense of relief
10. Q115 Better understand my thoughts
11. Q128 Feel that s/he accepts me for who I am
12. Q114 Feel confident
13. Q124 Remember details of my stories
14. Q113 Feel understood
15. Q121 Talk more
16. Q110 Feel that it is easy for me to talk to him/her
17. Q138 Feel free to talk to him/her whenever I need
18. Q120 Feel like s/he is listening to me in earnest
19. Q136 Feel that s/he notices changes in the way I am feeling
20. Q137 Feel that s/he senses how I feel
21. Q135 Feel that s/he pays attention to my unexpressed feelings
22. Q133 Feel that s/he puts him/herself in my shoes
23. Q64 Appears to enjoy listening to me
24. Q73 Focuses his/her attention on my feelings
25. Q103 Tries to find things we have in common
26. Q33 Gives me good advice
27. Q3 Seems to understand my feelings
28. Q112 Change my opinions
29. Q100 Listens to the complete message
30. Q4 Seems to understand my thoughts
31. Q104 Allows me to express negative feelings
32. Q83 Smile
33. Q74 Quickly notices if I am pleased or disappointed
34. Q34 Focuses only on me
35. Q72 Likes the challenge of listening to complex information
36. Q58 Humiliates me
37. Q59 Makes statements that communicate that my ideas don't count
38. Q30 Talks offensively
39. Q50 Uses killer glances
40. Q51 Criticizes my feelings
41. Q78 Frowns (showing disapproving facial expressions)
42. Q47 Discounts or explains away my feelings
43. Q68 Is not willing to listen to me
44. Q69 Does not pay attention to things I say
45. Q10 Talks back to me aggressively
46. Q71 Argues with the details of stories I tell
47. Q36 Reacts with resistance to what I am saying
48. Q8 Becomes irritated
49. Q49 Fails to acknowledge anything I say

50. Q79 Yawns
51. Q57 Ignores my attempts to express my feelings
52. Q17 Is impatient
53. Q60 Focuses on any inconsistencies and/or errors in what I'm saying
54. Q9 Gets tense
55. Q20 Begins arguing with me
56. Q84 Is polite
57. Q87 Is detached
58. Q24 Respects my opinion even if s/he thinks differently
59. Q77 Completes my sentences impatiently
60. Q86 Makes restless movements with his/her head, arms, hands, or legs, clicks a pen, etc.
61. Q23 Listens to me, even if s/he holds a different opinion
62. Q48 Engages in monologue
63. Q16 Twists my words
64. Q91 Shows frustration when I don't present my ideas in an orderly, efficient way
65. Q88 Avoids eye contact
66. Q62 Assures that s/he is listening to me by using verbal acknowledgments
67. Q43 Tries hard to understand what I am saying
68. Q42 Asks for more details
69. Q63 Asks questions that show his/her understanding of my opinions
70. Q44 Uses full sentences instead of saying just yes or no
71. Q56 Keeps track of the various points I make
72. Q45 Offers relevant information in response to questions I ask
73. Q76 Asks me to tell my account (story)
74. Q95 Encourages me to clarify a problem
75. Q82 Expresses interest in my stories
76. Q15 Responds to me personally
77. Q55 Gives me an indication that s/he will remember what I say
78. Q41 Makes nonverbal gestures that indicate that s/he is listening to me
79. Q11 Listens to me attentively
80. Q13 Pays close attention to what I say
81. Q96 Gives me time and space to talk
82. Q32 Listens to my problems
83. Q65 Gives me his/her undivided attention
84. Q85 Responds to my questions
85. Q14 Creates a positive atmosphere for me to talk
86. Q97 Allows me to fully express my self
87. Q2 Gives me indications that s/he seriously consider my opinion
88. Q98 Expresses understanding nonverbally
89. Q31 Doesn't get tired of listening to me
90. Q52 Shows eagerness in his/her responses
91. Q6 Often interrupts me while I am talking
92. Q19 Begins to talk before I finish talking
93. Q5 Can hardly bear to have silence in conversations with me
94. Q18 Talks more than me
95. Q7 Imposes his/her own views
96. Q21 Listens to me calmly
97. Q28 Hurries me into talking faster
98. Q25 Lets me talk, when we begin to talk at the same time
99. Q81 Stares at the computer screen while I'm talking to him/her
100. Q80 Uses the telephone while I'm talking to him/her
101. Q70 Is distracted while I'm talking
102. Q66 Protects our conversation from interruptions

103. Q35 Keeps firm eye contact
104. Q108 Begins a discussion by telling me how long s/he has for me
105. Q109 Looks at his/her watch or clocks in the room when s/he has limited time to listen to me
106. Q107 Hurries me and lets me know that s/he has a limited amount of time to listen
107. Q129 Concerned about what s/he thinks of me
108. Q130 Worry about myself -.16 .28 -.07 .07 .00 .08 .71 .03 -.04
109. Q131 Aware of my shortcomings (disadvantages)
110. Q127 Try to impress him/her
111. Q39 Starts talking about unrelated issues
112. Q38 Changes the subject too frequently
113. Q89 Makes irrelevant jokes all the time
114. Q37 Seems bored
115. Q102 Restates what I say
116. Q22 gives me a brief summary of what I have said
117. Q75 Completes my sentences to help me clarify what I am saying
118. Q101 Asks continuing questions like Could you tell me more?
119. Q54 Listens to more than just spoken words
120. Q53 Is sensitive to what I am not saying
121. Q99 Can guess my intention or purpose without being told
122. Q26 Insists on saying things in his/her own words
123. Q27 criticizes me
124. Q29 Sticks to his/her opinions
125. Q1 Waits for me to begin talking when I am hesitating
126. Q12 Listens to me carefully
127. Q93 adjusts his/her language when talking to me
128. Q92 is comfortable and confident
129. Q94 Uses (comfortable) silences in the conversation
130. Q40 Gives ambiguous responses
131. Q46 Sends double messages, where verbal and nonverbal messages differ
132. Q132 Feel that s/he pretends to understand me even when s/he does not
133. Q134 Feel that s/he keeps listening to me, even if s/he is not interested
134. Q67 Prefers to hear facts and evidence
135. Q61 Prefers to listen to technical information
136. Q106 Points out inaccuracies in my account (story)
138. Q90 Uses professional language or jargon that I don't understand

### FLS scales

Scale name	Items
1. Positive Consequences	Q117 Q118 Q126 Q122 Q116 Q111 Q125 Q119 Q128 Q114
2. Destructive listening skills	Q30 Q51 Q78 Q47 Q68 Q69 Q10 Q8 Q17 Q9
3. Constructive listening skills	Q43 Q63 Q95 Q82 Q11 Q13 Q96 Q65 Q14 Q97
4. Destructive listening skills: domineering listener	Q6 Q19 Q18 Q7 Q21 Q28
5. Destructive listening skills: escape; phone computer etc.	Q81 Q80 Q70
6. Destructive listening skills: no time	Q108 Q109 Q107
7. Negative Consequences; Makes me concerned	Q129 Q130 Q131
8. Destructive listening skills; change the subject	Q39 Q38
9. Constructive listening skills; Reframing	Q102 Q22 Q75 Q101



## 2. Self-Concept Clarity scale (Campbell et al, 1996)

Item
1. My beliefs about myself often conflict with one another.*
2. On one day I might have one opinion of myself and on another day I might have a different opinion.*
3. I spend a lot of time wondering about what kind of person I really am.*
4. Sometimes I feel that I am not really the person that I appear to be.*
5. When I think about the kind of person I have been in the past, I'm not sure what I was really like.*
6. I seldom experience conflict between the different aspects of my personality.
7. Sometimes I think I know other people better than I know myself. *
8. My beliefs about myself seem to change very frequently.*
9. If I were asked to describe my personality, my description might end up being different from one day to another day.*
10. Even if I wanted to, I don't think I could tell someone what I'm really like.*
11. In general, I have a clear sense of who I am and what I am.
12. It is often hard for me to make up my mind about things because I don't really know what I want.*

## 3. Factor Analysis clarity vs. confusion scale

Rotated Component Matrix<sup>a</sup>

	Component			
	1 confusion	2 role clarity	3	4
I feel frustrated I can't make order in my priority at work	.826	-.052	.063	.102
when I have a lots of tasks I don't know from where to begin	.781	.010	.176	-.009
I feel my thought is not organized	.679	-.041	.429	.110
I feel lost in my role	.567	-.377	.105	.442
My role in achieving the organizational targets is clear	-.027	.813	-.137	.077
The assign of the group I belonged to is clear for me	-.114	.786	.176	.078
My role in the group / department is clear	.045	.727	-.219	-.104
I experience some conflicts in my professional identity	.369	-.432	.206	.157
I feel is difficult for me to keep concentrate for long time, I'm easily distracted	.323	.165	.705	.224
I feel vague	.430	-.067	.648	.248
Mostly I succeed in making order	-.144	.285	-.604	-.141
It's clear for me what I have to do in the proximate week	.041	.351	-.534	.371
I tend to jump from one task to another	.012	.041	.163	.765
Feelings of stress and anxiety accompany me lots of hours in the daily work	.173	-.036	.080	.719

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Component Transformation Matrix

Component	1	2	3	4
1	.676	-.377	.537	.336
2	.274	.893	.062	.351
3	-.250	-.233	-.386	.857
4	.637	-.076	-.748	-.171

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

#### 4. Research questionnaires

##### 4.1 pre – questionnaire for the mentors

**Hello and welcome,**

The questionnaire below consisting of 3 parts. The first part, deal with the relationship between you and your mentee, and the way you perceive your abilities as mentor. The second part, deals with your job today. Finally, the last part is demographic with general questions.

**Thanks you.**

##### **Part I -**

Mark the extent of you're agree on the following 16 items, regarding your connection between you and your mentee & the way you value yourself as a mentor:

	<b>Item</b>	<b>0</b> strongly disagree	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b> Half agree half disagree	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b> strongly agree
1	I appreciate my mentee, and believe he will be a successful engineer	0	1	2	3	4	5	6	7	8	9	10
2	My job as mentor is essential for the success of my mentee in his role as a new engineer in the Fab	0	1	2	3	4	5	6	7	8	9	10
3	I am satisfied with the quality of my relationship with my mentee	0	1	2	3	4	5	6	7	8	9	10
4	I feel confident in my ability to communicate ideas	0	1	2	3	4	5	6	7	8	9	10
5	I can easily assess what information my mentee already knows	0	1	2	3	4	5	6	7	8	9	10
6	I feel confident in my ability to assess my mentee's learning style	0	1	2	3	4	5	6	7	8	9	10
7	I can easily identify the main points I want to cover with my mentee	0	1	2	3	4	5	6	7	8	9	10
8	I am able to figure out if my mentee understood my main points	0	1	2	3	4	5	6	7	8	9	10
9	I prioritize my mentee's training based on their performance goals	0	1	2	3	4	5	6	7	8	9	10
10	I have a formal system to manage communication with my mentee	0	1	2	3	4	5	6	7	8	9	10
11	I take time to organize my thoughts before I meet with my mentee	0	1	2	3	4	5	6	7	8	9	10
12	I am sensitive to my mentee learning styles when I teach him / sharing information	0	1	2	3	4	5	6	7	8	9	10
13	I actively assess whether my mentee	0	1	2	3	4	5	6	7	8	9	10

	understands what I'm presenting												
14	Improving my communication skills, especially listening, makes me more effective at my job	0	1	2	3	4	5	6	7	8	9	10	
15	Helping a new engineer come up to speed more quickly benefits me directly	0	1	2	3	4	5	6	7	8	9	10	
16	I am highly motivated to be a good mentor	0	1	2	3	4	5	6	7	8	9	10	

**Rate how much do you agree on the following 7 items:**

	<b>Item</b>	<b>0 strongly disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 Half agree half disagree</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10 strongly agree</b>
1	Before criticizing somebody, I try to imagine how I would feel if I were in their place	0	1	2	3	4	5	6	7	8	9	10
2	If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	0	1	2	3	4	5	6	7	8	9	10
3	I sometimes try to understand my friends better by imagining how things look from their perspective	0	1	2	3	4	5	6	7	8	9	10
4	I believe that there are two sides to every question and try to look at them both	0	1	2	3	4	5	6	7	8	9	10
5	I sometimes find it difficult to see things from the "other guy's" point of view	0	1	2	3	4	5	6	7	8	9	10
6	I try to look at everybody's side of a disagreement before I make a decision	0	1	2	3	4	5	6	7	8	9	10
7	When I'm upset at someone, I usually try to "put myself in his shoes" for a while	0	1	2	3	4	5	6	7	8	9	10
8	I am quick to spot when someone in a group is feeling awkward or uncomfortable	0	1	2	3	4	5	6	7	8	9	10
9	If I say something that someone else is offended by, I think that that's their problem, not mine	0	1	2	3	4	5	6	7	8	9	10
10	Other people tell me I am good at understanding how they are feeling and what they are thinking	0	1	2	3	4	5	6	7	8	9	10

**Part B -**

Please rate how much do you agree with each of the 10 items below. Treat them as part of your job as an engineer at the Fab, and the average feeling that you have about your role as a whole.

	<b>Item</b>	<b>0</b> <b>strongly</b> <b>disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b> <b>Half</b> <b>agree</b> <b>half</b> <b>disagree</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b> <b>strongly</b> <b>agree</b>
1	The assign of the group I belonged to is clear for me	0	1	2	3	4	5	6	7	8	9	10
2	There are days that I was certain about my job as an engineer and there are days that I have a completely different position	0	1	2	3	4	5	6	7	8	9	10
3	Many times I feel frustrated that It's difficult for me to make order in my priority at work	0	1	2	3	4	5	6	7	8	9	10
4	I feel lost in my role at work	0	1	2	3	4	5	6	7	8	9	10
5	Sometimes I feel my thought is not organized	0	1	2	3	4	5	6	7	8	9	10
6	My role in achieving the organizational targets is clear for me	0	1	2	3	4	5	6	7	8	9	10
7	I feel vague many hours in the daily work	0	1	2	3	4	5	6	7	8	9	10
8	when I have a lots of tasks I don't know from where to begin	0	1	2	3	4	5	6	7	8	9	10
9	My role in the group / department is clear	0	1	2	3	4	5	6	7	8	9	10
10	In general, I feel high sense of clarity in my job as an engineer in the Fab	0	1	2	3	4	5	6	7	8	9	10

### **Part C - Demographic data & Background**

1. Code
2. Mark your age
3. Sex:
  - a. Male
  - b. Female
4. How much time do you work at Intel? Time In years
5. How long have you work with your mentee? Choose according to the number of months
6. Number of 1:1 meetings I have in an average week with my mentee
7. What is the common communication paths do you have with your mentee
  - a. Mails
  - b. Individual meetings
  - c. Random meetings
  - d. Phone calls
8. What is the average duration of 1:1 meeting do you have with your mentee?
  - a. 0-20 min
  - b. 20-40 min

- c. 40-60 min
- d. 60 min
- e. hour and more

#### 4.2 pre – questionnaire for the mentees

### Hello and welcome,

Here a questionnaire consisting of 3 parts. The first part will discuss the connection between you and your mentor at work. Second part will discuss your role today. Finally, the last part consist overall demographic questions.

**Thank you.**

### Part A

Here are 18 items relating to the relationship with your mentor. Please rate how much you agree with each item in aggregate; based on what you have been experience together until now:

	Item	0 strongly disagree	1	2	3	4	5 Half agree half disagree	6	7	8	9	10 strongly agree
1	Feel that s/he cares about me	0	1	2	3	4	5	6	7	8	9	10
2	Feel that it is easy for me to open my heart	0	1	2	3	4	5	6	7	8	9	10
3	Feel that I am a unique and valuable human being	0	1	2	3	4	5	6	7	8	9	10
4	Feel that s/he is interested in me	0	1	2	3	4	5	6	7	8	9	10
5	Feel comfortable	0	1	2	3	4	5	6	7	8	9	10
6	Feel a sense of relief	0	1	2	3	4	5	6	7	8	9	10
7	Feel that s/he accepts me for who I am	0	1	2	3	4	5	6	7	8	9	10
8	Feel confident	0	1	2	3	4	5	6	7	8	9	10
9	Tries hard to understand what I am saying	0	1	2	3	4	5	6	7	8	9	10
10	Asks questions that show his/her understanding of my opinions	0	1	2	3	4	5	6	7	8	9	10
11	Encourages me to clarify a problem	0	1	2	3	4	5	6	7	8	9	10
12	Expresses interest in my stories	0	1	2	3	4	5	6	7	8	9	10
13	Pays close attention to what I say	0	1	2	3	4	5	6	7	8	9	10
14	Gives me time and space to talk	0	1	2	3	4	5	6	7	8	9	10
15	Creates a positive atmosphere for me to talk	0	1	2	3	4	5	6	7	8	9	10
16	Allows me to fully express myself	0	1	2	3	4	5	6	7	8	9	10
17	Better understand myself	0	1	2	3	4	5	6	7	8	9	10
18	Appears to enjoy listening to me	0	1	2	3	4	5	6	7	8	9	10

**Part B**

Please rate how much do you agree with each of the 10 items below. Treat them as part of your job as an engineer at the factory, and the average feeling that you feel about your role as a whole.

	<b>Item</b>	<b>0 strongly disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 Half agree half disagree</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10 strongl y agree</b>
1	The assign of the group I belonged to is clear for me	0	1	2	3	4	5	6	7	8	9	10
2	There are days that I was certain about my job as an engineer and there are days that I have a completely different position	0	1	2	3	4	5	6	7	8	9	10
3	I feel frustrated I can't make order in my priority at work	0	1	2	3	4	5	6	7	8	9	10
4	I feel lost in my role at work	0	1	2	3	4	5	6	7	8	9	10
5	I feel my thought is not organized	0	1	2	3	4	5	6	7	8	9	10
6	My role in achieving the organizational targets is clear for me	0	1	2	3	4	5	6	7	8	9	10
7	I feel vague many hours in the daily work	0	1	2	3	4	5	6	7	8	9	10
8	when I have a lots of tasks I don't know from where to begin	0	1	2	3	4	5	6	7	8	9	10
9	My role in the group / department is clear for me	0	1	2	3	4	5	6	7	8	9	10
10	In general, I feel high sense of clarity in my job as an engineer in the Fab	0	1	2	3	4	5	6	7	8	9	10

**Part C - Demographic data & Background**

1. Code:
2. Mark your age:
3. Sex:
  - a. Male
  - b. Female
4. How much time do you work at Intel? Time In years
5. How long have you work with your mentor? Choose according to the number of months

**6. Rate how much do you agree with the below items regarding your mentor:**

	<b>Item</b>	<b>0 strongly disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 Half agree half disagree</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10 strongly agree</b>
6.1	My mentor is a significant figure for me	0	1	2	3	4	5	6	7	8	9	10
6.2	My mentor have a lot of influence on me	0	1	2	3	4	5	6	7	8	9	10
6.3	I learn a lot from my mentor	0	1	2	3	4	5	6	7	8	9	10
6.4	I appreciate my mentor	0	1	2	3	4	5	6	7	8	9	10
6.5	I have a desire to take as much as I can from my mentor	0	1	2	3	4	5	6	7	8	9	10
6.6	My mentor is essential for the success of my job	0	1	2	3	4	5	6	7	8	9	10
6.7	I am satisfied with the quality of the relationship with my mentor	0	1	2	3	4	5	6	7	8	9	10

7. Number of 1:1 meetings I have in an average week with my mentee
8. What is the common communication paths do you have with your mentee
  - a. Mails
  - b. Individual meetings
  - c. Random meetings
  - d. Phone calls
9. What is the average duration of 1:1 meeting do you have with your mentee?
  - a. 0-20 min
  - b. 20-40 min
  - c. 40-60 min
  - d. 60 min
  - e. hour and more

*4.3 weekly questionnaire for the mentees*

**Hello and welcome to the weekly questionnaire,**

Here are two short parts. Please complete them after a significant 1:1 meeting you had this week with your mentor.

**Thank you.**

1. Code:
2. Week:

**Part I -**

Here are 18 items relating to the communication with your mentor. Please rate how much do you agree. Please refer to a specific 1:1 meeting with your mentor

	<b>Item</b>	<b>0</b> strongly disagree	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b> Half agree half disagree	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b> strongly agree
1	Feel that s/he cares about me	0	1	2	3	4	5	6	7	8	9	10
2	Feel that it was easy for me to open my heart	0	1	2	3	4	5	6	7	8	9	10
3	Feel that I am a unique and valuable human being	0	1	2	3	4	5	6	7	8	9	10
4	Feel that s/he was interested in me	0	1	2	3	4	5	6	7	8	9	10
5	Feel comfortable	0	1	2	3	4	5	6	7	8	9	10
6	Feel a sense of relief	0	1	2	3	4	5	6	7	8	9	10
7	Feel that s/he accepts me for who I am	0	1	2	3	4	5	6	7	8	9	10
8	Feel confident	0	1	2	3	4	5	6	7	8	9	10
9	Tries hard to understand what I am saying	0	1	2	3	4	5	6	7	8	9	10
10	Asks questions that show me his/her understanding of my opinions	0	1	2	3	4	5	6	7	8	9	10
11	Encourages me to clarify a problem	0	1	2	3	4	5	6	7	8	9	10
12	Expresses interest in my stories	0	1	2	3	4	5	6	7	8	9	10
13	Pays close attention to what I say	0	1	2	3	4	5	6	7	8	9	10
14	Gives me time and space to talk	0	1	2	3	4	5	6	7	8	9	10
15	Creates a positive atmosphere for me to talk	0	1	2	3	4	5	6	7	8	9	10
16	Allows me to fully express myself	0	1	2	3	4	5	6	7	8	9	10
17	Better understand myself	0	1	2	3	4	5	6	7	8	9	10
18	Felt he/she enjoyed listening to me	0	1	2	3	4	5	6	7	8	9	10

**The duration of the 1:1 meeting with my mentor for this weekly report was:**

- a. 0-20 min
- b. 20-40 min
- c. 40-60 min
- d. 60 min
- e. hour and more

**Part B -**

Rate how much do you agree with each of the 9 items below, in relation to the specific feeling you go out after a 1:1 meeting with your mentor for this current week:



	<b>Item</b>	<b>0 strongly disagree</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5 Half agree half disagree</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10 strongly agree</b>
1	My role in achieving the organizational targets is clear for me	0	1	2	3	4	5	6	7	8	9	10
2	The assign of the group I belonged to is clear for me	0	1	2	3	4	5	6	7	8	9	10
3	My role in the group / department is clear for me	0	1	2	3	4	5	6	7	8	9	10
4	This week, I feel high sense of clarity in my job as an engineer in the Fab	0	1	2	3	4	5	6	7	8	9	10
5	I feel vague	0	1	2	3	4	5	6	7	8	9	10
6	I have a lots of tasks, and I don't know from where to begin	0	1	2	3	4	5	6	7	8	9	10
7	I feel frustrated this week, that I can't make order in my priority at work	0	1	2	3	4	5	6	7	8	9	10
8	I feel my thought is not organized	0	1	2	3	4	5	6	7	8	9	10
9	I feel lost in my role at work	0	1	2	3	4	5	6	7	8	9	10

**Place your sense of confusion** in the scale below, after your 1:1 meeting with your mentor, where 0 indicates not confused at all and 10 indicates very confused:

<b>0 not confused at all</b>	1	2	3	4	5	6	7	8	9	<b>10 very confused</b>
--	---	---	---	---	---	---	---	---	---	---------------------------------

**Place your sense of clarity** in the scale below, after your 1:1 meeting with your mentor, where 0 indicates not at all and 10 indicates very clear:

<b>0 not clear at all</b>	1	2	3	4	5	6	7	8	9	<b>10 very clear</b>
---------------------------------------	---	---	---	---	---	---	---	---	---	------------------------------

Did a **new knowledge was created** between you and your mentor meeting, new enlightenment or new understanding?

- a. Yes
- b. No

**What have you learned this week from your mentor?**


\_\_\_\_\_.

**How will you use the new knowledge created at the meeting between you at your role?**

\_\_\_\_\_.

## 5 Weekly Tips to the mentors

week	mail
<p>6</p> <p>26.11.12</p>	<p style="text-align: center;"><b><i>R U available to help?</i></b></p> <p style="text-align: center;"><b>Availability test</b></p> <p>Are you available to meet with your mentee? Is it possible to precede / postpone to a better time? Try this week to initiate 1:1 meeting with your mentee while you available to listen.</p> <div data-bbox="730 539 1007 792" data-label="Image"> </div> <p style="text-align: center;"><i>Thanks</i></p>
<p>7</p> <p>02.12.12</p>	<p style="text-align: center;"><b>Listening and Silence</b></p> <p>Start your 1:1 meeting with 10-5 minutes of listening. Drop a question into the space, for example: How was your week? How did you feel in a PM you performed? How was this week in Eng. School (whoever it is relevant)? In those moments let your mentee try to fully responding and finish speaking without your remarks during his speech. Then leave another 15 seconds pause to see maybe he will add something.</p> <div data-bbox="759 1357 975 1615" data-label="Image"> </div> <p style="text-align: center;"><i>Thanks</i></p>

<p>9</p> <p>09.12.12</p>	<p><b><i>What is the best thing that you did today?</i></b></p> <p><b>Beneficial Questions</b></p> <p>Using Beneficial questions allows creating closeness and openness. Try using questions such as the following questions for your next 1:1 meeting</p> <ul style="list-style-type: none"> <li>☒ Tell me about your hobby?</li> <li>☒ Which strengths are reflected in your hobby?</li> <li>☒ How these can be integrated into this role?</li> <li>☒ What is the best thing you did today / this week?</li> <li>☒ What best helps you in your integration to your new job / learning process for your tool?</li> </ul>  <p><i>Thanks</i></p>
<p>10</p> <p>16.12.12</p>	<p><b><i>Mirror mirror on the wall, who's the prettiest of them all?</i></b></p> <p><b>Reflection</b></p> <p><b>Reflection</b> is a key tool for inner and outside observation. The role of the personal mentor (in the helping process, for the entrance of the young engineer, to his new role) is to <u>place 'mirrors'</u> in front of the mentee, so that some of the identity formation of the new engineer will be made through the <b>encounter with himself mediate by the 'other'</b>.</p> <p><b>What is reflection?</b></p> <p><b>Reflection</b> is a human behavior characterized by imitation of the other when dialogue with him, in the way one gets the image of himself in the mirror. The reflection produces empathy and trust. Reflection is generally defined as the return of the things the other person tells - a return that expresses deep listening to the other. Reflection is described as experience similar to reverberation, reflection of what's happen inside me "here and now" by the other. Therefore, to be successful in reflect, the ability to separate and identify what belongs to us and what comes from the other is necessary. It is an experience of familiarity and participation. In the personal mentoring ,the reflection by the mentor intended to be used as mirror to the new engineer, by which he/she would watch himself and sharpen his/her internal issues to be defined, and help him consolidate his professional identity and develop personal awareness .</p>

**Types of reflection - how it can be applied to mentoring?**

- Content Reflection- return word for word what was said; content reflection helps the mentee create clarity, look at what he said again and hear how they reverberate in the other.
- Emotions Reflection - helps in raising the emotional dimension of the mentee folded in his words, even if not expressed explicitly (for example expressed by the body, voice, etc.). Reflecting emotions often involves interpretation.
- Opinion / thought Reflection – In that kind of reflection we will tell the mentee: What are the main ideas that are up in the final minutes. It helps the mentee "making order" allowing the mentee to stop and look at attitudes and thoughts of him.

**In your interaction with your mentee, try this week, in the appropriate occasion, to reflect your mentee what you heard, to make sure you've heard it all. After your mentee finished, you can go back in your own words of what is said. You can try to use the different kind of reflections suggested above.**



*Thanks*