Design and Testing of a Jewish Model for Secular Leadership as a Driver for Organizational Development and Operational Excellence in Manufacturing.

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[1] Plant A has no seasonal variation.

[2] Plant B has some seasonal variation in February, March and April to manufacture folders in advance of the beginning of the school year in August and September. As can be seen from the graphs these months were not included in the data collection period for this research.

Acknowledgements

Three companies - A, B and C - were participants in this research. All three gave permission for and were participants in this work-based Participatory Action Research (PAR). However, due to company reorganizations, change of locations and changes of personnel since commencing this research in 2015, results and conclusions were not always able to be shared with the individuals initially giving those permissions. Therefore, I have chosen not to name the companies and will only refer to them as Company A, B or C. However, I remain immensely grateful for their permissions, participation, mentoring and generosity of time, resource, and commitment to engage with this research. That this research did prove to be the vehicle for business improvement is due in no small part to their encouragement, guidance, and participation.

I am also most grateful to Professor Ifan Shepherd and my advisor Dr Chris Mabey for their leadership and guidance.

I gratefully acknowledge some key individuals who have guided me through this research particularly in helping me to understand how the truth of Judaism belongs to everyone and not just the house of Israel. To Rabbi Andy Pepperstone, Dr. Robert Tornberg, Dr. Micky Leibowitz, Rabbi Ari Kaiman, synagogue president Sam Young and to so many others. I also gratefully acknowledge Kim Morgan of Barefoot Coaching who was instrumental in my transition from Senior RAF Officer to becoming a coaching leader, my warmest thanks.

Lastly, many thanks to my wife Aileen who has lived through five years of lost weekends and evenings whilst I pored over this research.

Yasher Koach.

Dedication

This research is dedicated to the eleven Jews of Etz Hiem in Pittsburgh who were murdered while worshipping on Shabbat in October 2019.

Joyce Fienberg, 75, of Oakland

Richard Gottfried, 65, of Ross Township

Rose Mallinger, 97, of Squirrel Hill

Jerry Rabinowitz, 66, of Edgewood

Cecil Rosenthal, 59, of Squirrel Hill

David Rosenthal, 54, of Squirrel Hill

Bernice Simon, 84, of Wilkinsburg

Sylvan Simon, 86, of Wilkinsburg

Daniel Stein, 71, of Squirrel Hill

Melvin Wax, 87, of Squirrel Hill

Irving Younger, 69, of Mt. Washington

And

Murdered April 27, 2019, on the last day of the Jewish Passover holiday in Chabad Synagogue, Poway CA.

Lori Gilbert-Kaye, 60, of Poway

May their names forever be a blessing.

שְׁמַע יִשְׂרָאֵל יְיָ אֱלֹהֵינוּ יְיָ אֶחָד

Abstract

Judaism has an oral and written tradition going back over 3,500 years. Core to this tradition are the stories of how our prophets, Judges, Kings and ordinary Jewish men and women have led the Jewish people including with the principles of Tikkun Olam (social justice), Chesed (acts of loving kindness) and Tzdacha (righteous giving). This research presented in this thesis builds a reflexive practitioner-based model founded in Judaism and 40 years RAF and Industrial experience. The model, to be called 20/20 LEADERSHIP, is offered as a set of principles or practical signposts particularly for new leaders wishing to build a participatory leadership practice to drive organizational development and operational excellence.

The model was developed using a multi-domain approach in Jewish and secular environments. Reflexive Thematic Analysis (RTA) using literature and a focus group developed the model of 12 key principles. The model was then tested using a Perception Survey in an environment of Participatory Action Research (PAR) to measure the impact of the model to effect business improvement. Further RTA were used to ascertain the utility of the operationalization of the model. These RTA also report changes by leaders to their evolved leadership practice and changes in attitudes in that practice during the reported business improvement.

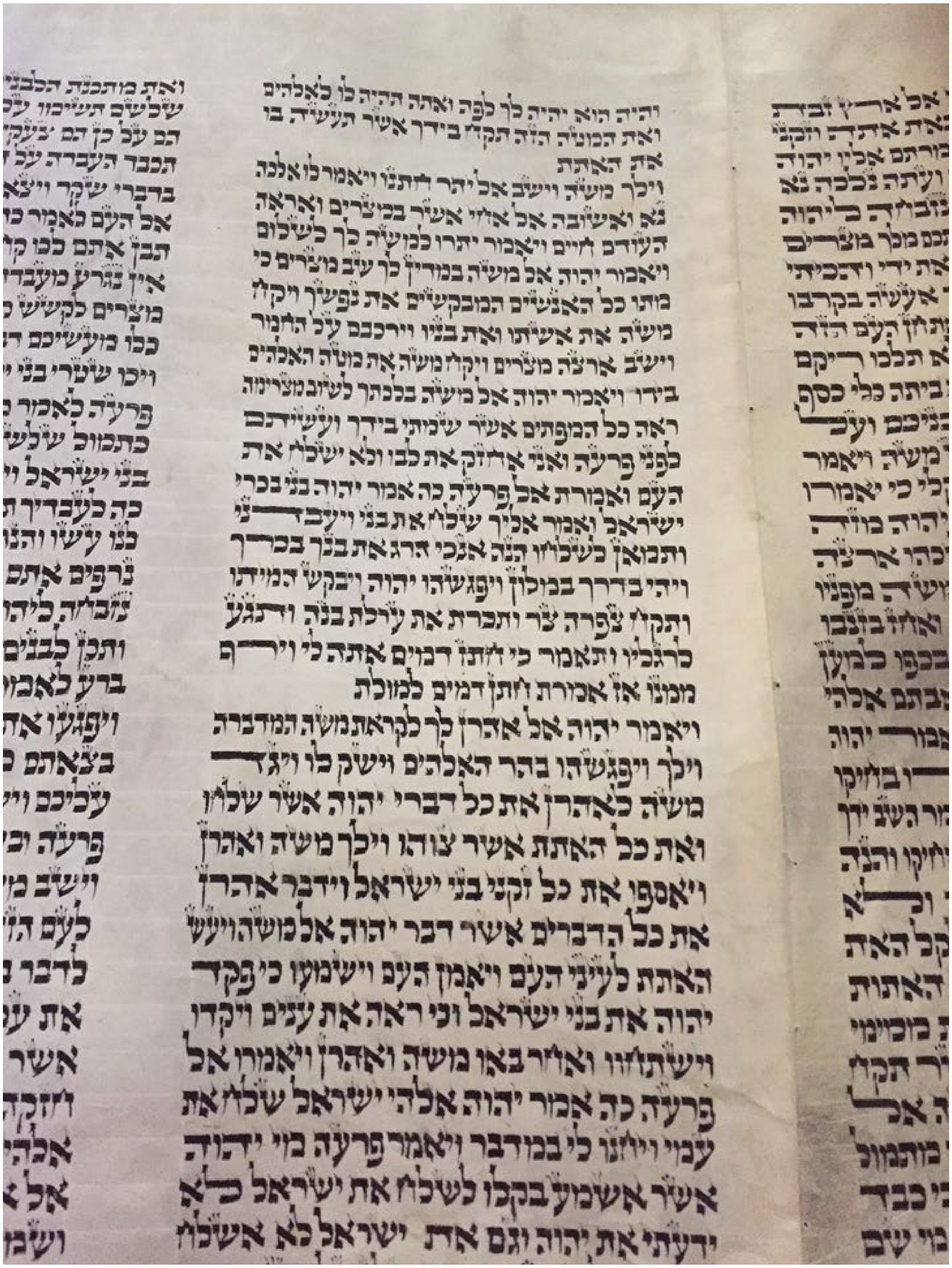
Though the model proved largely successful, this paper discusses the limitations of using 20/20 LEADERSHIP and PAR in changing an organization from the perspective of the middle manager. The paper concedes that 20/20 LEADERSHIP has similarities with elements of other models but that 20/20 LEADERSHIP concepts based in Judaism's 3500-year history predate these modern models.

The thesis explores how coaching, and mentoring are force multipliers for organizational development when used as a means of operationalising the new model. The uniqueness of the study lies in building a secularized model, operationalized through the vehicle of a new model of PAR that combined the author's experience of Judaism, military service, and senior industrial leadership in promoting organizational development and operational excellence. Such a model is currently absent from the leadership literature.

Key Words

Tikkun olam, chesed, tzdacha, Operational Excellence, Participatory Action Research, Jewish Secular leadership model, followership, 20/20 LEADERSHIP.

Figure 1. Torah Parshat Vayelech, G-d calls Moses to leadership



Part 1: Identifying and Articulating an Industrial Leadership Model based in Judaism and Practitioner Experience.

Chapter 1

1.1.1. Introduction

The objectives of Chapter 1 are:

1. To provide a timeline for this thesis.
2. To introduce the foundational concepts of 20/20 LEADERSHIP. These are based on the author's three major life experiences: faith, (i.e. the chosen Jewish core principles), force (i.e. practitioner experience in the Royal Air Force), and factory (i.e. practitioner experience of senior leadership positions in the paper manufacturing and consumer packaging manufacturing Industry in the United States).
3. To describe the field of Authentic Leadership as opposed to being a leader that is attempting to be authentic i.e. being true to leading in any other paradigm.

This thesis reports a practice-based doctoral project carried out in the USA that had two main aims. The first aim was to advance the author's professional leadership practice and the second to translate that documented practice into a leadership model to drive organizational development and operational excellence. This second aim is in the tradition of looking back at historic leadership in order to learn what elements of that practice can be useful for leaders today.

The new model is called 20/20 LEADERSHIP for a number of reasons. Firstly, the model is constructed in part from deep practitioner reflection for its foundation. Secondly, 20/20 LEADERSHIP takes its core concepts from looking back at the 3500-year-old tradition of Judaism and how those concepts remain relevant to leadership today. Thirdly the model challenges leaders to be reflective, using hindsight to build the self-awareness that is essential to take business into the future.

This study combines two complementary approaches, namely exploratory and confirmatory research. Turkey (1980) states we need both approaches as finding the question is often more important than finding the answer. Exploratory research aims to connect ideas to unveil the cause and effect in relationships, whilst confirmatory research investigates if the theory is supported by the facts. These two approaches complement each other to discover relevant findings in the most efficient, reliable, replicable and applicable manner (Butler, 2014). In this thesis, exploratory research will inductively construct a model of leadership based in Judaism and practitioner experience using qualitative techniques, whilst confirmatory research will use mixed methods analysis to confirm the model's efficacy in its application in industry.

All research in this thesis was conducted and supervised in accordance with the ethical requirements of Middlesex University and agreed at the Programme Approval Panel (PAP) on 19 October 2015. Students at that time were not required to resubmit a version of the ethical clearance form for each data collection exercise undertaken during their research project. However informed consent was given for each data collection exercise as the research project unfolded. In addition, I discuss carrying out ethical participatory action research as part of the researcher's professional practice at Appendix 1.

Research Questions

This research is prompted by the following questions to which I provide an overview to the answers at 4.10.4.

a. What are those elements of my history, culture and practice that have caused me to lead in the way I do today?
b. What can I bring from my Jewish faith-based leadership background, coupled with my 30 years of RAF service and 12 years leadership in industry to construct a model of leadership that will be equally effective in the synagogue and on the shop floor?
c. Once secularised and operationalized, can this new leadership model become a driver for organizational development and operational excellence in manufacturing?

Project Overview

1.1.2. In this research, a practitioner-derived model is inductively constructed. This model builds on the author's Jewish faith and practical leadership experience. This work builds on the author's MA research that focused on what followers require of their leaders in times of complex change. The research was highly influenced by writings about complex change (Connors and Smith, 2011), building learning organizations (Senge, 1994), engineering paths of change (McWhinney, 1992), Kotter's change model (Kotter and Cohen, 2012; Kotter 2014), organizational and cultural change (Schein, 2010), person-centred change (Rogers, 1967 and 1980), motivation theory (Maslow, 1943; Hoffman 2008), and lean management (Rother, 2010). These leaders all argue that real change is people-focused, and this thesis builds on that argument. This research argues that leaders must enable followers to be successful, that followers must be participants in their own change, and that both cultural change and true leadership must be framed within a moral and ethical framework that promotes the growth of both the individual and the business.

This research will be presented in 4 parts.

Part 1. Building the 20/20 LEADERSHIP Model.

Investigates the author's practitioner leadership from a basis in Judaism, 30 years in RAF leadership and 12 years in middle and senior leadership roles in the paper manufacturing industry in the USA in parallel with leadership roles in the Jewish Community. The leadership model is constructed inductively using Semantic Reflexive Thematic Analysis from a study of Jewish literature and Jewish practitioner's experience. The developing principles of the model are exercised in a preliminary community-based project. Part 1 concludes by presenting the 20/20 LEADERSHIP model.

Part 2. Application of 20/20 LEADERSHIP in a Secular Preliminary Research Project.

Applies the 20/20 LEADERSHIP model in a preliminary research project for real-world business change in the packaging industry. Participatory Action Research (PAR) is used as the primary vehicle applying 20/20 LEADERSHIP for the explicit purpose of improving business.

Part 3. Formal Testing and Results of Application of the 20/20 LEADERSHIP Model.

Describes testing and results of the 20/20 LEADERSHIP model at two locations in manufacturing consumer and specialist packaging using PAR in problem solving. The change project is bracketed by an employee quantitative perception survey for the purpose of measuring change. Between the two surveys, mentoring and coaching using the derived model (20/20 LEADERSHIP) are used to promote change. Qualitative techniques are used to capture how the change has impacted the teams and individuals. New leaders are trained in 20/20 LEADERSHIP, and the impact of that training and initial practice is analyzed using Latent Reflexive Thematic Analysis.

Part 4. Conclusions, Limitations and Opportunities for Future Research.

Uses triangulation of the quantitative and qualitative analyses to make a final determination on the utility of 20/20 LEADERSHIP to promote organizational development (French and Bell, 1999) and to drive operational excellence. Part 4 also presents a new practitioner-based model for PAR and concludes with limitations on this research and opportunities encountered for further research.

Thesis Timeline.

The Project Phase of this DBA began in October of 2015 after receiving committee approval of ethics and methodology. Figure 2 illustrates the timeline of research activities and the points where the 20/20 LEADERSHIP model was developed and modified. The initial model was produced in the third quarter of 2016 after a preliminary project founding a Hebrew school, researching my practitioner leadership, and completing Reflexive Thematic (RTA) Analysis of a focus group of 10 Synagogue presidents. A second preliminary project based in industry ran from the second quarter of 2016 to the second quarter of 2018. The final testing phase ran from the end of the second quarter 2018 to the last quarter 2019. After further analysis, the final model was completed at the end of 2019. Figure 2 shows the project timeline that includes time taken for project-related data gathering and analysis.

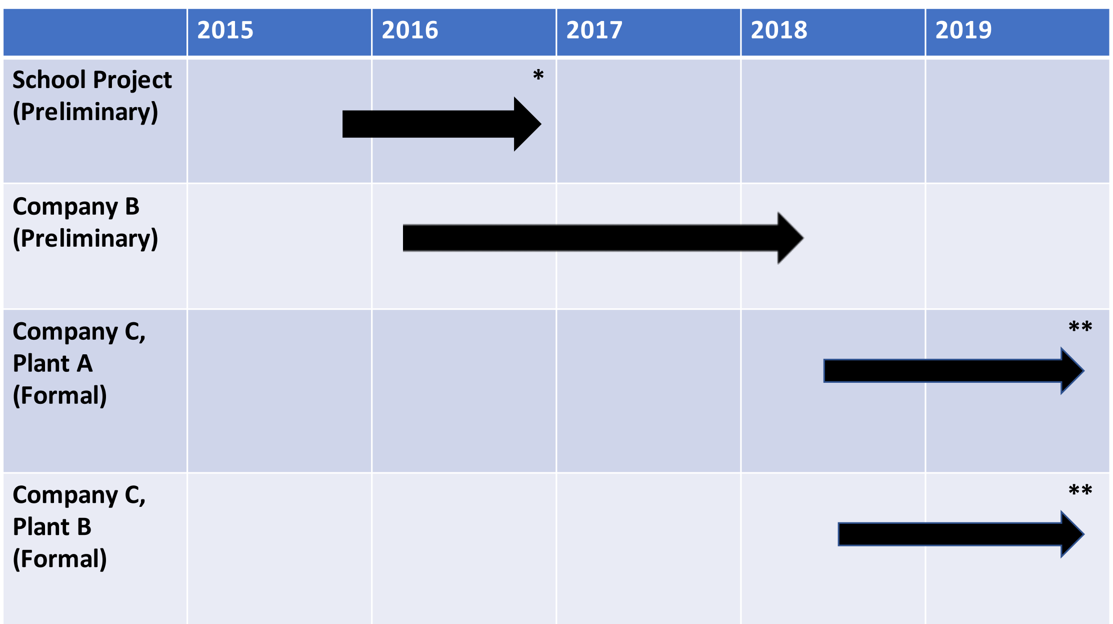


Figure 2. Timeline of Projects and development of the 20/20 Leadership Model.

* Model Iinitially developed,

** Model modified after completion of the practical phase of the business improvement.

A K-A Reflective Practice:

Throughout this thesis, examples of the author's reflective practice are placed in boxes within or after the text to which the reflection refers.

1.1.3. Becoming the Leader I am Today.

My philosophical worldview (Guba, 1990) is driven by Torah, 3500 years of Jewish history and culture, and 35 years of leadership experience whilst growing teams and achieving operational excellence. Core to Judaism are several driving concepts that I have chosen, due to my personal faith and leadership practice to make the core to 20/20 LEADERSHIP. These defining concepts that preserve and direct Judaism are mitzvot, the fulfillment of worthy deeds; tikkun olam - translated as social justice; chesed- translated as acts of loving kindness; tzdacha – translated as righteous giving. These concepts are discussed in detail in Appendix 2.

Business Ethics

Senator Joseph Liebermann (Sacks, 2016) states that he is embarrassed and deeply troubled by leadership in the USA today and particularly the number of current leaders who are guilty of unethical and immoral behaviour. Rabbi Abraham Joshua Heschel once taught a class of rabbinical students that though as kosher scholars they could become skilled at spotting blood in an egg, rendering it as treif [3], that they must also be able to spot blood in money (Salkin, 1994). Heschel was saying that keeping kosher was important, but that Judaism is about ethical profits as well as prophets. Business ethics, (Pellissier, 2001) has come into sharp relief due to the corporate and individual-led scandals such as Enron, Madof, AIG, Freddie Mac, Lehmann brothers, the 2008 market crash etc. We have seen unethical leaders seek personal gain at the expense of their organizations and their employees (Manz, et. al. 2008). Sacks (2016) counters this stating that an ethical core is a motivation that has enabled the 3500-years of Jewish survival. Further to a religious imperative, Beddoes-Jones (2011) offers a secular viewpoint in this same regard. Beddoes-Jones posits that we have an immediate need for a new philosophy of leadership that is an intelligent, compassionate, pro-social approach that is purposeful, and creates meaningful relationships within organizations (Beddoes-Jones, 2011). Such is the purpose of the 20/20 LEADERSHIP model.

Jewish Leadership Writings.

Jewish foundational principles are based in our religious text the Torah. These principles have been expanded on both in oral and written tradition over the last 3500 years such as Talmud, Mishnah etc This tradition of critique and expansion continues in modern Jewish literature such as spiritual courage in

[3] Food that is not kosher and thus cannot be consumed by Jews

leadership, (Yanklowitz, 2014), Jewish leadership behaviours (Lewis, 2006), (Appendix 19), building strong Jewish communities (Brown, 2008), reimagining leadership in Jewish organizations, (Galperin, 2012), new ways to lead synagouges, (Hoffman, 2006), relational leadership in Jewish organizations, (Wolfson, 2013) and leadership lessons from Moses, (Cohen, 2007). Wolfson is a pioneer of a relational approach to leadership of Jews, "Using the power of relational leadership to transform the Jewish community" (Wolfson, 2013) which he researched by seeking out pioneers of Jewish communal vitality (Wolfson, 2013 p. xiii). Key to Wolfson's book is his assertion that "religion now means social action." This text particularly resonated with me as I attempted to understand what I could take from leadership in the Jewish community to grow just social communities in industry. This relationship building featured in Company B and Company C as we solved problems and found solutions through participatory relationships (Principle 7) founded on trust. Brown (2008) talks about what is needed to build strong communities with vision and mentorship, leading authentically and leading for transformation. Galperin (2012 p.19) focuses on bringing Jews together to improve current lay and professional leadership in the Jewish community to lead with conviction and passion. Importantly he says that "People want to be challenged; they want to grow in work, and they want to be mentored." Finally, Cohen (2007) talks about Moses who led the Hebrews out of slavery and through the dessert for forty years, and "who better than Moses to hold up as a paradigm from whom every future leader can learn. His actions and skills serve as models for future generations," (Cohen, 2007 p. ix). Lewis (2006 p.82) continues this theme, "What better example for today's Jewish Leaders - than Moses being mentored by Jethro his non-Jewish father-in-law." This reinforces that the preceding literature is for Jews who are leading Jews, but also introduces the powerful concept that even Moses needed a mentor and importantly that his mentor was not a Jew. Jewish law states clearly that we are to deal with all our fellow man as we deal with G-d, (Zipperstein, 1983), thus we must find ways to lead all Jews and Gentiles in exactly the same way, even though those people may come from different cultures, religions, or philosophies.

Lewis (2006) states that Judaism's insights on leadership have application beyond the synagogue and resonate profoundly in the secular realm. After establishing the general principle that in Judaism leaders must be both competent and of unassailable character, Lewis offers six behaviours for Jewish leadership, as summarised in Appendix 19. It is useful here to explain the differences between behaviours, values, attitudes and principles as pertain to this research. An individual's values are the moral core of what makes that individual who they are based on culture, faith or community and family history. They are deeply seated and are largely immutable, such as a total belief in the dignity of all life. These values can be expressed as principles seen as actions such as one should not murder or steal. Behaviours are actions that support values and principles and are demonstrated by how one conducts oneself, such as intervening when an individual is being bullied or abused.

Although (Lewis, 2006) offers a good analysis of Jewish leadership behaviours, one has to challenge whether his six are in fact behaviours. For example, is humility a behaviour or a personality trait, or both? The failure of psychometric testing to measure personality traits to predict actual human behaviour in experiments has proven to be disappointing. This has left researchers to consider the possibility that the consistency of personality traits was just an illusion, and that it was actually the strength of situations, not personality, that controls how individuals behave, (McAndrew, 2018). Lewis's list certainly does not align with the Big 5 personality traits in psychology, (Judge and Bono, 2000), (Syed et al., 2018) that have been defined as openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, but they identify specific additional personality traits that should drive behaviour for Jewish leaders. Therefore, though there is much literature on Jewish leadership of Jews both historic, religious, and modern, there is no single model of Jewish leadership of non-Jews, thus 20/20 LEADERSHIP will begin to fill that research gap.

A K-A Reflective Practice:

In deconstructing my initial research proposal, I found several errors in my original understanding of authenticity. With realignment, these have now opened new paths of learning, to try to understand some new truth in leadership and help me to take a path to be an authentic individual who practices 20/20 LEADERSHIP, understanding how to lead with truth as a Jew.

This journey of thinking about and reflecting continually on authenticity is not unique to Judaism, but at this level of intensity, it is new to me and to my leadership practice. Neither is this uniquely a spiritual journey; I am sure an agnostic or humanist can equally demonstrate self-examination in their own authentic leadership by following their own moral compass if they have a singular driving motivation.

1.1.4. RAF Leadership 1978 - 2007

It was my experience as a RAF Non-Commissioned Officer (NCO) and later as a commissioned officer, that leaders in the military learn more about leadership from their subordinates and peers than from classrooms. Grint (2005) while studying RAF leadership found that in effect, followers teach the leaders how to lead. Grint's finding was borne out by his research at the RAF NCO Leadership School at RAF Hereford. While undertaking NCO training myself at RAF Hereford, coincidently around the same time as Grint's research, each team member took turns to take a leader and then a follower role. This experience of being humble enough to learn from each other, and then leading by that example (Hesselbein, 2011; Niemer, 2009), contributing to each other (Cartwright, 2013) and mentoring each other is translated into the 20/20 LEADERSHIP model. This level of self-awareness to the need to look outside of one's own resources for the betterment of the individual and the business is key to authentic leadership, (Schwartz, 1994; George, 2003; Avolio et al., 2015; Avolio, et al., 2019) and thus to 20/20 LEADERSHIP.

1.1.5. Industrial Leadership Experience – 2007 to Present.

Industrial leadership has been the most challenging of my three areas of leadership experience (i.e., synagogue leadership, military and civilian industrial), yet it has in some ways been the most rewarding, as I have been able to impact many 'followers' who had no leadership experience or training. Military leadership certainly has higher stakes in terms of mission execution and life and death decisions, and synagogue leadership has more impact at a personal spiritual level, but civilian leadership also has need and ample opportunity. Ferguson (2006 p.3) offers a comparison between the complexities of military and civilian leadership stating that results reveal that leaders in both the military and government civilian sectors cite the same top three challenges. "Organizational Operations/ Performance is the top challenge reported by military leaders but is third for civil servants. Managing/ Motivating Subordinates is a second for both uniformed military and government civilians. Personal Leadership earns the top spot for civil servants while it is third for the military." In military leadership, everyone is necessarily professional, and shares the same training and focus on the mission and lives the culture. In industrial leadership, leader training rates none-to-little on the spectrum when compared with the military and therefore goes some way to why I believe 20/20 LEADERSHIP training was so well received and brought such immediate results. The industrial mission (business goal) is often ill-defined, contradictory, and obscured by private agendas; culture develops by happenstance and is often at odds with the company's 'culture poster'. Leaders are often only focused and graded on how they manage their Key Performance Indicators and budget rather than how they nurture their people and where individuals are often hired for how little they can be paid as much as for what they can bring to the organization.

Another experience from industrial leadership is that a leader's latest idea or theory is often inflicted on the team, often without context and rarely in a participatory fashion. One of these ideas which if introduced correctly is a force multiplier for business is Operational Excellence (OPEX) using Lean manufacturing techniques (Rother, 2010). In Appendix 22, I discuss how I used OPEX and lean manufacturing in organizational development and how these became successful due to applying these paradigms for business development 20/20 and PAR. In the military and the synagogue, one **has** to operate in a participatory fashion. My experience is that participatory action is at best a choice in industry, with too many alpha males operating from offices with closed doors.

1.1.6. Synagogue Leadership 2012 - 2019

As a synagogue leader, one is always striving to do the right thing, but how does the leader know what is the 'right thing' to do in a given situation? Almost any deviant behaviour can be explained as being 'the right thing' by the perpetrator acting within their own worldview (Anderson, 1990). However, the right thing in a faith or secular community will always be an action that is considered right by the majority of those in the culture or community in which the act is carried out when aligned with its core principles. The Torah gives us direction on what is the right thing to do, starting with a meta model known as the 'Rules of the Pact' or, as it is known outside of Judaism, The Ten Commandments. The Torah contains 613 moral rules and values further expanded on in writings such as the Talmud, Mishnah, etc. However, this does not preclude originality in the interpretation of the rules, such as Jews are encouraged to do within the bounds of The Thirteen Rules of Interpretation (Ishmael, 2002). Berghofer (2019) considers that doing the 'right thing' means making a choice that the collective wisdom knows to be the way to act. However, every individual and leader has to find their 'right thing to do', their own moral compass (Bennis, 2012) or true north (George, 2015).

Another influence that aligns with my Jewish faith and culture is that of the Toa Te Ching (Dyer, 2006). In the Toa Te Ching, Lao Tzu's writes that, "When the task is complete, the people will say we did this ourselves." This resonates particularly well with my world view and aspiration as I want individuals to be empowered to find and be integral to the solution to their own problems. I want to enable individuals to be themselves, to grow toward and experience self-actualization (Mazlow, 1943) in equal measure at work and in their personal lives. Why should individuals have to be 'someone else' in the workplace? It is not authentic or healthy; rather, it is damaging, diminishing and incongruent, leading to mental and physical illness (Sherwood, 2019).

Mentorship

Moses though imperfect (Gottlieb-Zornberg, 2016; Sacks 2016) was a leader continually mentored through his imperfection by others in the same way as was my experience in the RAF. Moses was mentored by Miriam his sister in meeting the people's needs, by Aaron his brother in his encouragement to continually go back to pharaoh, and by Yitro his father-in-law (Exodus: 18-13) in establishing and meting out a system of justice. Furthermore, over a forty-year period, Moses mentored his successor Joshua to complete the task of leading the Jews into the Promised Land.

In the RAF, we were not continually taught about leadership; rather, we were mentored in leadership at all stages of our careers. For me, this mentorship includes mentoring from seniors, peers, and subordinates. As junior officers we were mentored by Warrant Officers[4]. Though junior in rank to us they were experienced and highly respected by the junior office corps, subordinates, and senior officers. I felt a bond with these men and held them in the utmost trust and respect. Having a bond with followers in 20/20 LEADERSHIP that includes that respect, trust and, if 'love' is a total commitment to the welfare and nurture of another person, then indeed 'love' will be essential. Leaders in the military, synagogue, and industry, must accept that they do not need to lead in isolation and that they too can benefit from mentorship. Leaders also need to continually mentor others to take organizations and people forward. This is important both for my business and synagogue, for efficiency and continuity. Thus, it was mentorship and the practice of leadership rather than academic training that prepared us for our responsibilities as military leaders. This same thought was more articulately expressed by the Rebe, who said that good leaders make good followers, but great leaders make more leaders (Telushkin, 2016).

Moses did not finish his task by leading the people into Canaan himself; rather, he had to hand this task to his mentee and successor Joshua. It is important for all leaders to realize that they may also have to hand over the task to others (Moore, 2018), particularly in times of crisis (Hargreaves et al., 2003) or to provide stability in succession (Cocklin and Wilkinson, 2011). A leader needs to see themselves as just one in a continuum, particularly with the current exit of so many baby boomers from the workplace (Cranston, 2006). In this regard, succession leadership is like a baton in a relay race (Saletnik, 2018). This idea of mentoring for leadership continuity is core to how leaders must operate in continuous improvement cultures in industry.

[4] Warrant Officer, senior to all other NCOs in holding the Queen's warrant. Junior in rank to a Commissioned Officer.

Bennis (1989 p. 39) states that:

> *"As we survey the path leadership theory has taken, we spot the wreckage of trait theory, the great man theory, the situationist critique, leadership styles, functional leadership, leaderless leadership, ….. distributed leadership, transformational leadership, heroic leadership, bureaucratic leadership, charismatic leadership, group-centred leadership, reality-centred leadership, leadership by objective, and so on."*

It is clear then that to advance the cause of leadership the 20/20 LEADERSHIP model must be practical, action-driven, and importantly show sustainable results and be more than a leadership fashion, so that leaders will be inclined to adopt it, and in its practice find that it can be sustainable as a business-building practice.

For over 3500 years, Judaism has not accepted that there is any separation between the spiritual (Hicks, 2002) and the secular. Ralph Waldo Emerson asserted that the two lives of work and the activity of the soul show little relation to each other with no disposition to reconcile themselves (Davidson, 1998). For thirty years, Davidson himself tried to bridge what he called irreconcilable worlds: the domain of the spirit and the busy life of work (Davidson, 1998). Judaism and the leadership model developed in this research contradict both Emerson and Davidson.

Though there are many models of Jewish Leadership for leading Jews, such as Lewis (2006) Appendix 19, and that of Sacks (2012) that have resonance with leading non-Jews, the literature is silent on the direct application of specific Jewish leadership principles to secular modern industrial leadership; this thesis will begin to address that deficiency.

1.1.7. Practical Experience of Leadership Relevant to Development of 20/20 LEADERSHIP

I have a lifetime's experience of Judaism, and thus I suggest I would be what Schön (1983) would call a 'professional' Jew; that is an experienced practitioner who operates autonomously. As a 30-year Royal Air Force veteran, I practiced military leadership in peace and war. Now, with a further 12 years of industrial leadership experience, I have had considerable exposure to civilian business practice at a middle and senior level. However, in themselves, these experiences do not mean I have consciously considered the intersection of these leadership drivers to understand how I lead, nor have I researched and studied the deeper elements of Jewish theology to apply these to develop leadership practice for myself or for others, including non-Jews.

Furthermore, 'time served' does not mean that I have reflected deeply on these disparate elements of lived experience to maximize my potential and that of the proposed 20/20 LEADERSHIP model. Additionally, I have not previously considered the value of experience as the scaffold on which to build a practitioner model for leadership from a Jewish perspective. The strength of studying though reflective practice as directed in this DBA is that reflection on experience and its practical application in action supplemented with real-world testing can provide new ideas which includes the development of a new Jewish focused leadership model. This research brings these strands of Judaism, military leadership, and industrial leadership (Faith, Force and Factory) together in the 20/20 LEADERSHIP model.

1.1.8. Authentic Leadership (AL)

In early discussions with my advisor about my desire to understand authentic Jewish leadership, we noted that my original interpretaion of authentic Jewish leadership was in practicing leadership whilst being authentic to Judaism, and I needed to become aware of the literature in the already establised field of Authentic Leadership. Further to this I became aware that some of the elements of my leadership practice were already aligned to the body of literature on AL. Thus it was important to understand how my evolutionary leadeship journey alingend with the existing field of AL and how I could differentiate 20/20 LEADERSHIP from AL.

Authentic leaders are steered by a compulsion to reach a goal by doing what is right for the team, group or organization, (Cameron et al., 2003) which aligns with tikkun olam. Brown (2008 pp. 76-77) says that "Authentic leadership comes from working out our own needs, desires deficiencies aspirations and strategies and without this self-knowledge, leaders can burn themselves out or find they compromise their personal integrity." AL is demonstrated in living truth (Ladkin and Spiller, 2013; Bruce et al., 2008). In Judaism, truth is the revealed word of G-d[5] and that revealed word is Torah. Conservative Judaism believes that the interpretation of truth does not need to be stagnant. The present-day task for the Jew is to reinterpret truth to make it applicable to the situations we live in today, that is the interpretation of truth from generation-to-generation l'dor va-dor (Hb[6]), without changing its core meaning. Webster (2019) defines truth as variously the body of real things, events, and facts, the state of being, the case, a transcendent fundamental or spiritual reality. This spiritual reality may be thought of as highly subjective, and each religion has its own

[5] It is traditional in Judaism to leave out vowels when writing out any of the names of the Divine.
[6] Hb = Hebrew.

code as a prism through which to understand truth such as the thirteen rules of interpretation of Torah laid down by Rabbi Ishmael in the first Century CE (Harlow, 2002). Scientific method establishes truth as the collection of evidence to prove a concept. Plato's view was that truth is a substantive though atypical and nonrelational property that finds its support in its realism (Hestir, 2016 p. 270). Thus, truth can be finite at its core but also be open to reinterpretation when that reinterpretation is acceptable to the majority in the collective within which the truth applies. So, can this understanding of truth as understood by Torah, science and philosophy be applied to a model of leadership honouring the past, whilst also focused on meeting the needs of secular leaders of today and tomorrow? This research argues that it can. The 'acid truth' for the leader be they motivated by faith or not, is that they maintain being authentic and true to themselves and then their followers, the integrity of this authenticity and truth being measured by others through relationship over time. Jewish life and Jewish Leadership must be about living Torah truth whilst recognising that even the greatest leaders have failings and even the worst have graces (Sacks, 2016).

George (2003) posits that leadership begins and ends with authenticity. So poor is the reputation of leaders in corporate America today that Andy Grove, CEO and Chairman of Intel, stated that he was ashamed to be part of Corporate America (George, 2003). Grove argued that America has lost sight of the imperative to select leaders that create healthy companies and that new authentic leaders that live by their values are required.

Authentic leadership (Avolio et al., 2015; Avolio et al., 2019) promotes the notion of the self as an autonomous, self-sufficient values-led inner essence, which can choose authentic action as a leader (Gardner, 2005; George, 2003). A recurring theme in this literature and in this study is how much extra energy one needs to expend (Principle 11[7]) to maintain being a truly authentic leader. It takes energy to be consistently authentic, particularly in transition to a new leadership paradigm such as to 20/20 LEADERSHIP, or in the crucible of the manufacturing industry continually setting the standard, team coaching, mentoring, discussing, explaining, and reaching consensus until authenticity is deep in one's practice, motivation, and psychology whilst at the same time meeting production targets and driving the bottom line. Authenticity is deeply correlated with openness, self-awareness and giving of oneself (Avolio et al., 2015; Bennis, 1989).

[7] Refers to the final principles of the 20/20 LEADERSHIP model.

1.1.9. Developing Self-Awareness

Self-awareness is key to AL and is the degree to which the leader is aware of their own strengths, limitations, developing an understanding of how others see them and thus how they can meaningfully impact others. To be self-aware, one must understand oneself and that begins with one's values (Kramer, 2017), as values form the basis of character and personality (Vogelgesang, 2017; Bilsky and Schwartz, 1994). The leadership time line at Appendix 6 and diagram to show leadership influences Appendix 7 were carried out as vehicles for reflection to build self-awareness of how my leadership had developed. These caused me to reflect deeply on the influences on how I lead today. These appendices detail different ways of looking at my leadership experience. Appendix 14 adds to this understanding and is an independent 'DiSC' psychometric analysis carried out during my recruitment to Company A that added to developing my self-awareness. Though psychometrics can be fodder for conformation bias, this example did promote self-reflection as promoted by Schön (1983) to aid in development of self-awareness.

A K-A Reflective Practice.

The focus at NCO leadership school at RAF Hereford was on 'doing' leadership rather than learning about it. This was also my experience when I moved to officer training at RAF Cranwell in 1992. As a section of eight officer cadets, we learned and practiced leadership together, with the leader role moving between us several times a day. As a result, my practice has developed that, when possible, I do not 'take' the lead, but rather 'pass the leadership baton' for others to also 'learn by doing' whilst I maintain a role as a mentor or coach.

Leadership mentoring and coaching made my time far more productive for the synagogue and for business as it created many leaders rather than just developing myself. I continue to grow though coaching others and reflecting on the experience and so this is a win-win situation. Leading by example was the norm in the RAF. However, as this research shows, leading by example should really be termed 'influencing leader behaviours in others.' Influencing behaviours creates acolytes rather than clones, who in turn become leaders and independent thinkers. This is particularly important when the mission must still succeed even if the leader is removed or in a military context, killed. Nurturing one's replacement is not as easy in civilian life where the average employee is nowhere as well-trained or motivated and leaders hang on to power for fear of losing their job. This is part of the reason why I believe civilian leadership is more challenging (or at least very different) when compared with military leadership. However, this higher level of military performance would be most useful to accelerate change in the civilian realm if the essence of ownership and 'mission' could be core to civilian leadership.

One cannot build an authentic leadership practice by being someone else (Ladkin, 2013). "If you want to improve the organization, you have to improve yourself – then the organization gets pulled up with you", (Indra, 2018, p.73). The Austrian leadership academy (Stoll et al., 2008) discusses establishing cultures of entrepreneurial leadership and Mino and Hanaki (2013) discuss building leadership capacity through hands-on experience and experiential learning; both of these are needed in manufacturing and in this model. Hougaard and Carter (2019) are more specific in putting the onus on leaders to be mindful in the here and now to discover how to lead themselves. Thus, leaders need a model that is entrepreneurial based in experiential learning that also challenges leaders to discover their own leadership.

Ladkin (2013) talks about the dangers of AL being the domain of the isolated individual. I can relate to this because striving to be an authentic leader has on occasion isolated me from my peers, due to AL being attractive and some staff wanted to move from peers' departments to work in mine. So, can an individual practice authentic leadership in an organization that does not promote the vision that all should be authentic leaders? My experience has shown that the answer is yes, if the individual has the commitment, awareness, motivation, desire, and energy to be authentic. Authentic leaders must act in accordance with deep personal values and convictions to build credibility and win the respect and trust of followers by encouraging diverse points of view and building collaborative relationships with followers, and thereby lead in a manner that followers recognize as authentic (Avolio et al., 2004). Though authentic leadership has many definitions and attributes, the working definition of authentic leadership used throughout the remainder of this research is centred on that of Avolio et al. (2015), which has four dimensions: self-awareness, balanced processing, transparency, and the ethical/moral dimension.

Cameron (2003) describes the journey to authentic leadership, Figure 3. This details psychological changes that an individual undergoes within their work environment as they move toward authentic leadership. This model explicitly states transparency, and the moral and ethical leadership (De Hoog and Den Dartog, 2008) dimensions that are characteristics of authenticity that come as a result of self-awareness. This overlaps with three of the four characteristics of authentic leadership identified by Avolio et al. (2004). Though this is Cameron's diagram, it tracks my experiences and influences that explain how I became the authentic leader I am today. As shown in the diagram, the personal psychological antecedents of self-awareness that are the major criteria for building self-awareness start with the role of life experiences, which is labelled in the diagram as 'where I come from'. These are the life experiences I have encountered on my leadership journey and detailed in the leadership timeline in Appendix 6, and diagram showing leadership affinity in Appendix 7. These life experiences built confidence and resilience into my leadership practice. By including my life experiences in consciously understanding that journey, I hope to illustrate how my authentic leadership development has been a dynamic lifetime process whereby trigger events have shaped my positive leadership development over time. My leadership skill set benefited greatly by spending 30 years in the RAF, a highly positive leadership-focused culture with vision and purpose driving a highly functioning organization. The RAF prepared me for the experiences that were the triggers to positive development, what Robbins (2018) calls reference experiences.

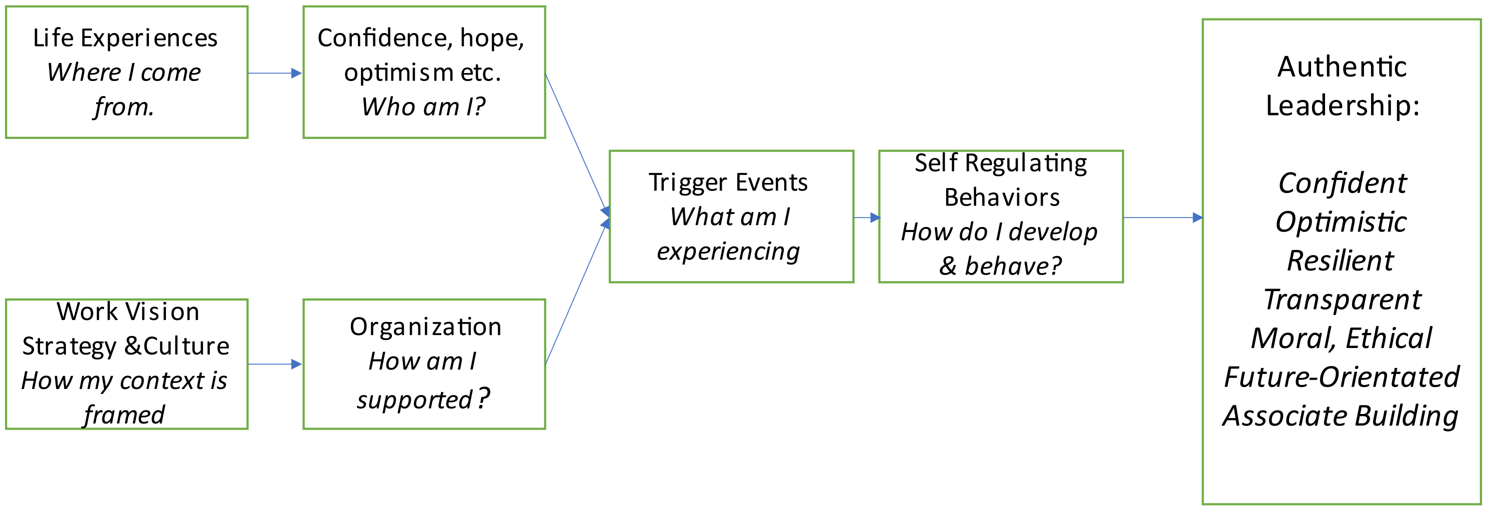


Figure 3. The Journey to Authentic Leadership. Adapted from Cameron (2003)

Avolio et al. (2004) in Figure 4, describe a further model which demonstrates the impact on follower attitudes and behaviors as a result of authentic leaders who mirror the desired behaviors required in industry. This model recognizes the direct impact of authentic leadership on growth of both the individual and the business. This growth leads to optimism, an example being the results of the Bob Project (Appendix 4) which brought individual commitment, creativity, job satisfaction, business improvement and meaningful engagement.

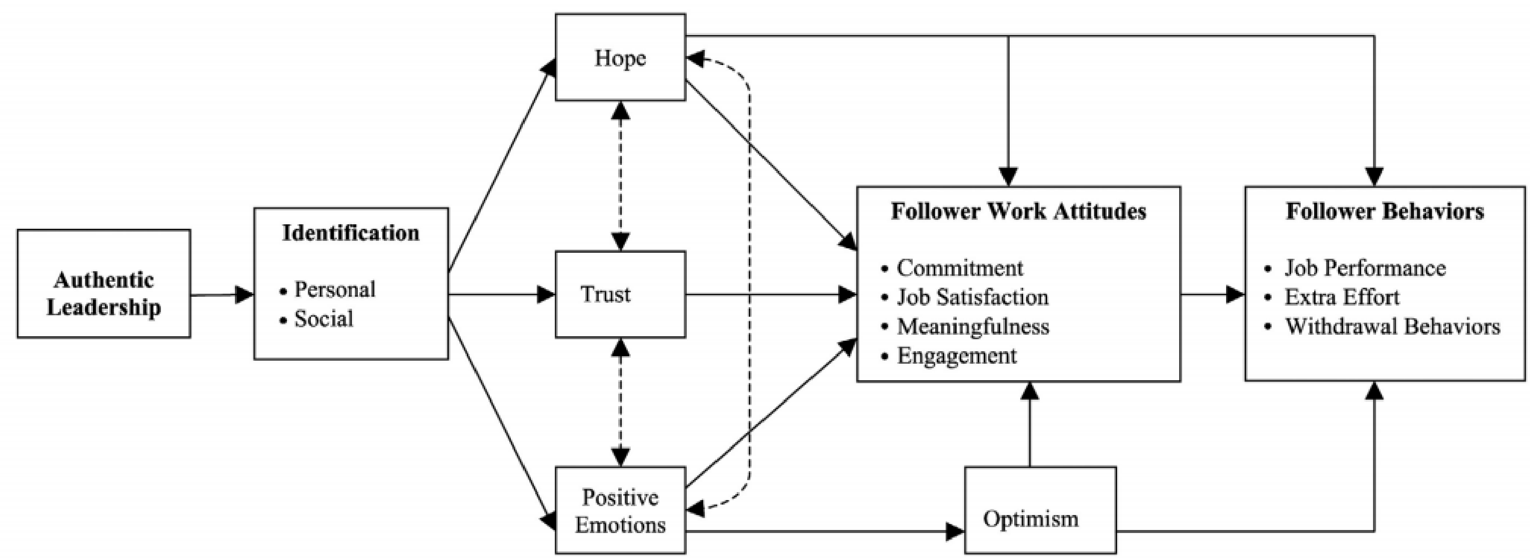


Figure 4. Framework Linking Authentic Leadership to Followers' Attitudes and Behaviors. Avolio et al., (2004)

Rogers (1967) began the conversation of positive psychology saying that psychology had until then almost solely concentrated on frailties and pathologies rather than vitality and health. This conversation was continued more recently in Appreciative Inquiry (Cooperrider and Whitney, 2005) and Positive Organizational Scholarship (Cameron et.al, 2003) changing the focus from a psychology of aberrant behaviour to a focus on nurturing a completely healthy psychology. The authentic leader must positively transform and develop associates in a positive environment to nurture individuals and teams to become more engaged follows and leaders. Furthermore, positivity in my experience is a strength that builds the business, and its leaders and positivity should not be considered as the domain of HR or as a ‘soft’ option.

1.1.10. Chapter Conclusions

Chapter 1 introduced how this thesis would be constructed and the timeline of this research. It discusses how this thesis blends the authors faith, and practitioner experience as the core principles upon which 20/20 LEADERSHIP will be built. The chapter introduced the four steps of action research and discussed why at even this early stage, this model more usually used in health and education settings, needed to be modified to meet the needs of practitioner-based research in the manufacturing industry. Lastly, chapter 1 discusses my evolution of understanding of the difference between authentic Jewish leadership and the established field of Authentic Leadership. This was the first occasion where my proposed study impacted on an already established study of leadership and began my consideration of how I would differentiate 20/20 LEADERSHIP from other leadership models.

Chapter 2

1.2.1. Research Approach, Methodology and Methods for Construction of the 20/20 LEADERSHIP Model

The objectives of Chapter 2 are:

1. To provide an introduction to Action Research (AR) and particularly Participatory Action Research (PAR) as a decision-making tool for building and testing the proposed model of 20/20 LEADERSHIP.
2. Introduce how literature on the use of PAR in manufacturing industries is essentially absent and how the traditional PAR model will require to be adapted to meet the needs of research in a manufacturing context.
3. Describe organizational justice aligned with tikkun olam and how a leader's authority and influence change with experience.

Action Research (AR) Models.

To illustrate their perspective on AR (Adams, 2014), many authors offer diagrammatic representations of action research models. Coghlan and Brannick (2013), Mertler (2009), and Drummond and Themessl-Huber (2007) summarize that AR models in the literature include circles of action, spirals, and varying combinations of circles and spirals and flow diagrams. At its most basic, action research can be viewed in terms of the circular processes outlined in Figure 5, in the AR cycle of (McNiff, 1988), with its four stages: diagnose, plan, act and evaluate.

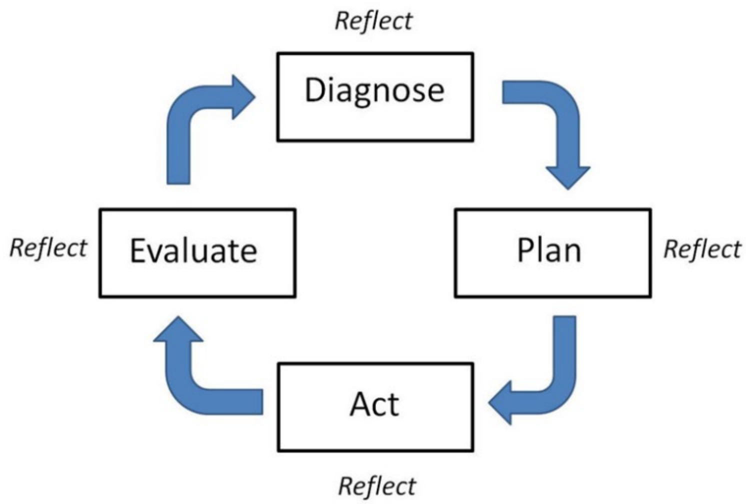


Figure 5. The Action Research Cycle, (McNiff, 1988)

Dick (2000) adds that the action research cycle can be characterized by action that leads to critical reflection and then perhaps to further action. Reflection should surround both negative and positive actions, results, etc. Too often, people only reflect on their experience once they have encountered failure; in fact, people should also make time for reflection when they are being successful (Bennis, 1989). Schön (1983) adds considerably to this notion, stating that reflection is how practicioners think in action. Luttenberg (2017) adds that reflection in action research involves the role of values and existential knowledge whereas Greenwood and Levin (2007) and Greenwood and Levin (2017) further the argument for using AR by discussing the use of AR in reviving democracy. However, their discussion is limited to higher education. McKernan (1987) and Reason and Bradbury (2008) state that AR is a form of reflective problem solving which enables practitioners to better understand and solve pressing problems in social settings. AR in this research is used as a vehicle for participatory problem-solving including reflection at each stage of the process.

Shani and Pasmore in Coghlan and Brannick (2013) offer another four-stage theory of the AR process, focused on the quality of relationships. This is particularly attractive for the purposes of this research as the quality of relationships are core to tikkun olam, organizational justice, trust, and participation. Both of these models offer elements that are relevant to this research so elements of both will be used to test the 20/20 LEADERSHIP model.

Trust.

According to Covey (2006 p.154), transparency is a critical value in high-trust organizations and the first key to restoring public trust, as “people can’t trust what they can’t see.” Thus, transparency and trust particularly in times of change (Smollan, 2013) are vital to authentic leadership and key to leading organizations particularly through complex change. Covey (2006 p.30) explains that, “Trust is a function of character and competence. Character includes integrity, motive, and intent with people. Competence includes capabilities, skills, results and track record. Both are vital.”

Previous studies have shown trust in leaders is an important element of organizational change, either as an antecedent or as a consequence of relationships at work, (Neves and Caetano, 2009) and (Saunders and Thornhill, 2003). In scholarly studies, the construct of trust has been conceptualized as operating on cognitive, affective and behavioral levels, (Lewicki et.al., 2006), (McAllister, 1995). As a word in common parlance, trust is a social construction that aids in sensemaking about relationships and decision-making (Lewis and Weigert, 1985). After defining what trust is, researchers who focused on assessing the importance of trust in the workplace found that that trust is associated with a range of important outcomes that include teamwork and leadership effectiveness; (Colquitt et al., 2007) both of which are key to this study. Dirks and Ferrin (2002) discuss trust in leadership particularly of immediate supervisors. Mayer et al., (1995), offer a model of trust whilst McAllister (1995) found that cognition-based trust has a positive influence in affect-based trust. Thus, trust is a social construct built through relationships that has an emotional component that positively impacts job performance.

Trustworthy managers preside over more productive organizations and are better able to increase organizational outcomes in companies experiencing ongoing change, (Byrne et al., 2011). Cho and Ringquist (2011) posit that positive and negative emotions are related to trust in the ability, benevolence and integrity of immediate supervisors and more senior change managers and emotions were more intense for distrust than for trust. The practical implications of this are that developing trust of teams in leadership though transparency and operating with fairness and tikkun olam will help to gain commitment to organizational change. Therefore, understanding how trust is built between leaders and teams and how it is maintained in an organization undergoing complex change is important, (Campagna et al., 2019).

Derivation of Context and Purpose Prior to an AR Cycle

Each AR cycle begins with a statement of that cycle’s Context and Purpose. Context and Purpose focus the researcher on understanding why the project is necessary, questioning what are the political, economic, technical, environmental, or sociological drivers for the project. When the context and purpose are fully understood, the researcher and participants can build the plan. In this practitioner learning, the context and purpose are driven by the organizational culture and business improvement which were directed by line-leadership or as a direct consequence of the researcher/practitioner's job description.

Constructing

Coghlan and Brannick (2013) replaced 'diagnosis' in their AR cycle with 'constructing', whilst Schein (1999) and Bushe and Marshak (2008) note that contemporary OD writers are moving away from the modernist notion of objective diagnosis with its medical connotation toward building AR in a social context. They note that in a complex system, interventions such as medicine are begun with a known outcome. The reality is that organizations are complex social constructions made up of a multitude of needs and compromises for which there is no known outcome. Coghlan and Brannick (2013) consider construction a dialogical activity in which stakeholders (my collaborators) construct what the issues are (production increase, customer complaints, requirement for continuous improvement etc.). From this, a determination can subsequently be made about the plan and action that they will take to move the organization forward.

A K-A Reflective Practice.

In all the case studies in Part 3 of this research, the construction (i.e., the problems to be solved), rather than being a dialogic activity were actually tasks given to me by plant leadership. Though all of the projects started with a given predetermined metric or outcome, that in some cases we refined, how we chose to execute the project was entirely up to us.

Planning Action

The process of defining the plan and understanding the desired future state is important as it sets boundaries and helps provide the project with focus. Planning action involves the researcher working with participators to design a program of activities through which they will affect change in their environment. Participative planning and action takes some of the pressure off the researcher in a business environment, as those who help design and make decisions about the plan that works for them, are also taking ownership of the outcome. This is the focus of Fisher and Sharp (2004), who identify that participation in organizations can be improved when the facilitator is conscious of improving personal skills, knowing what good looks like, and knowing how to influence others. Coghlan and Brannick (2013) discuss this same theme stating that when team members are used as change agents, they become engines of their own change. Ownership through collaboration and participation therefore gives a far greater chance of sustaining the outcome of the plan.

Taking Action

In this phase the plan is executed, and interventions are made collaboratively. As actions are completed, new learning takes place and new areas for improvement can be revealed from team knowledge and new understanding. This new knowledge brings opportunities for immediate or future action learning cycles or projects. As collaboration (working together) becomes participation (joint decision making), the value and impact of the action learning grows and informs a new culture.

Evaluating Action

The final phase of the action learning cycle is evaluation of both the planned and unplanned actions. These actions are evaluated against the initial construction and purpose or as in the projects reported in this research, the business need. In the practical business projects reported in this research this was the phase that received the majority of leadership interest. This evaluation includes questions such as, "Have the individuals' experience and knowledge of the workplace improved as a result of the project? Can line management measure the change?" and importantly, "Can the results be confirmed independently?"

A K-A Reflective Practice.

My default is to practice participatory action whenever possible which made AR not only a good fit for me but effective as a tool for buy-in of the team to drive OD and business improvement. Having to present our results to the leaders in the business not only provided feedback but also a sanity check ensuring that I bring the data back to the social group for them to view and to assess if my conclusions reflected their real work experience.

There may be multiple action cycles in a particular project, and the purpose of each cycle is to build a platform of new knowledge to inform the next cycle as in Figure 6. Each new cycle is placed within the context and purpose or business need of the next stage of the research project.

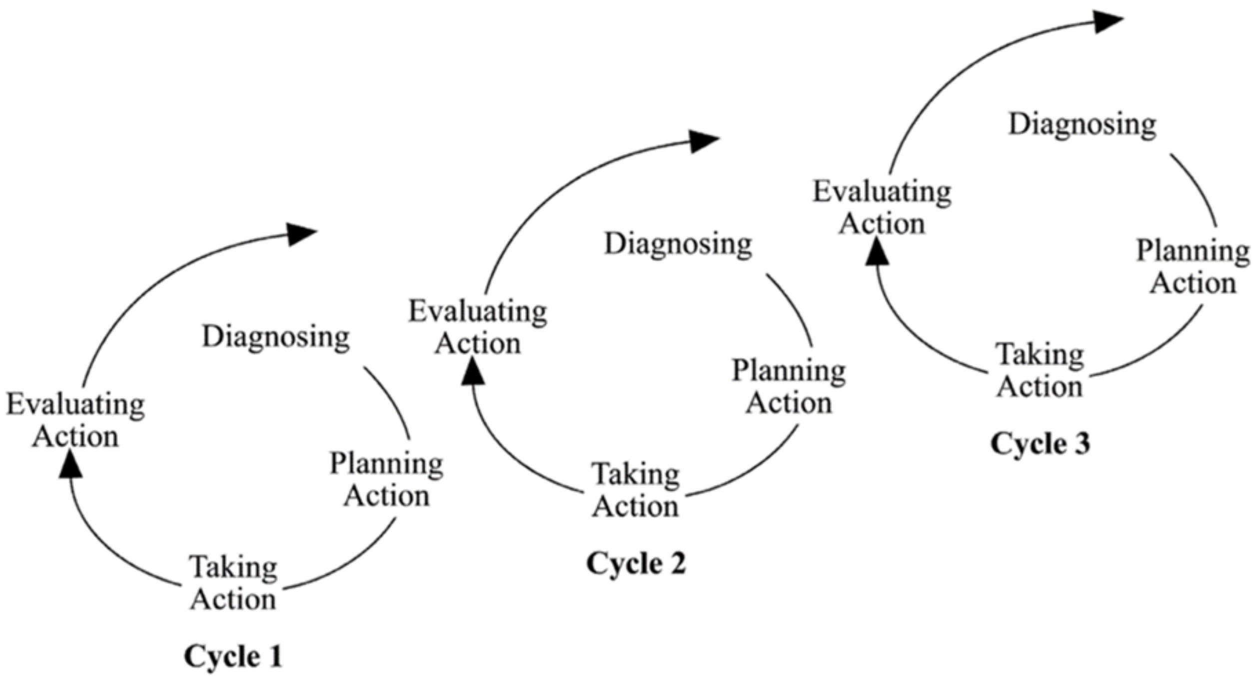


Figure 6. Action Research Cycles. (Coghlan and Brannick (2013))

Business Need.

In Figure 7, I replace diagnosis with 'Business Need' as this is the genesis of the PAR projects that we execute in this research. Driving OPEX is primarily about business improvement and not research, and thus the business need will drive the projects with participatory action research being the vehicle to derive the new knowledge upon which the business improvement will be defined, planed, executed and reviewed.

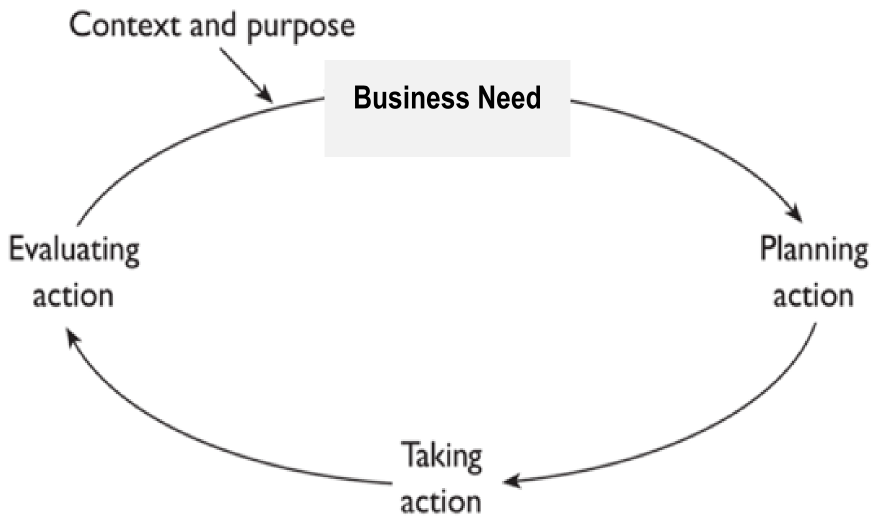


Figure 7. The Action Research Cycle. (Adapted from Coghlan & Brannick, 2013)

1.2.2. Action Research and Manufacturing

Research Gap between the Traditional AR Cycle and its Application in Manufacturing

Literature on the application of Action Research (AR) and Participatory Action Research (PAR) in manufacturing is essentially absent, though there are abundant instances of AR being used in other fields, particularly education, health, and nursing (McNiff, 1988; Van Manen, 1990; Reason and Torbert, 2001; Kemple, 2001; Reason and Bradbury, 2006; Reason and Bradbury, 2008; Brkich et al., 2010; Bradbury and Divecha, 2020), etc. Drahomira (2017) does offer an example of AR in ecology but again this does not extend to technology driven, minimum education, minimum wage manufacturing. I have only been able to find two references, Brown and Frame (2001) and Bhatnagar (2017), referring to AR used in manufacturing, neither of which provide successful examples of the application of AR or PAR in manufacturing. However, Brown and Frame (2001) does advocate AR for rapid organizational change. Bhatnagar (2017) which similarly to this research used AR to develop leadership in a fast-paced manufacturing change scenario, also suffered from a lack of on-going commitment from senior leaders similar to that which I experienced in Company C in Part 3. Interestingly, the Brown and Frame (2001) research suffered from change of ownership of business, as did this research. From this lack of coverage in the academic literature related to AR in manufacturing, it may be considered that AR and specifically PAR is not particularly suited for the unstable world of manufacturing, being better suited for application in the relatively stable environments of education, health, and ecology, though I was not aware of this at the outset of this study. However, as PAR was successful in this study, this may be a first step in attempting to fill this gap in the literature.

As far back as Van Manen (1990) and McCutcheon and Jung (1990), researchers were questioning whether AR could live up to its promises as there is no singular approach or model, underlying the many projects that parade under its banner. "Action research defies easy description due to its methodological variations," (McCutcheon and Jung, 1990 p.144), yet the various models do seem to share common assumptions, of democracy; external knowledge; reflection/action; change and teacher-as-researcher, (Van Manen, 1990, p.152). These same assumptions are also foundational to this research. Further to this, and particularly relevant to this research, Raelin and Trehan (2015) discuss AR in terms of a new type of leadership practice.

Researchers using AR have planned and positioned their research on a continuum between statistical methods from qualitative orientation through to autobiographical methods (Kemmis, et al., 2014), similarities that are shared with this research. Bogdan and Biklen (1982), Kemmis and McTaggart (2014), and Reason and Bradbury (2008), demonstrate that new thinking is constantly emerging, and that AR is still undergoing consistent refinement.

1.2.3. Participatory Action Research (PAR)

When subjects of social experiments play an active part in the research by giving feedback to the researcher whilst making conscious decision on how to proceed, the AR is usually called Participatory Action Research (PAR) (Castellanet and Jordan, 2004). Empirical studies have confirmed the empowering potential of PAR, enhancing critical consciousness, knowledge, social networks, and sense of community, (Foster-Fisherman et al., 2005), (Nelson et al., 1998), but few researchers articulate the level of participation required (Greenwood et al., 1993), (Dworski-Riggs and Langhout, 2010). "PAR has a focus outside just the organizational context and involves egalitarian participation by a community. It focuses on issues of power and powerlessness and how the powerless are excluded from decision making and empowers people to construct and use their own knowledge," (Coghlan and Brannick, 2013 p.44-45). Common to this is a rejection of the idea of an external expert entering an organization to record and represent what is happening. Kemmis et al. (2014) recognise a shift in the way of doing research as a recognition of people in their own environments participating actively in all aspects of the research process and that research conducted by participants is orientated to making improvements by the participants themselves. This shift to owning both the research and the solution is regarded as empowering to the participants. Kemmis et al. (2014) go on to state that existing approaches to PAR contested traditional ways of conducting educational research. This research is an extension of the contested traditional ways of conducting educational research in that it documents a senior leader as the internal consultant and a participatory researcher.

My practice and research have found that using PAR with 20/20 LEADERSHIP to develop peer collaborative communities enables leadership to come from any level of the organization even without formal authority when the change leader develops relationships that build participators that become corporate citizens who then sustain followership as discussed below.

Followership, according to Crossman and Crossman (2011) is ill-defined. Their paper showed that out of thirty authors in their meta-analysis, only five attempted to define followership. For this research, I have developed my own definition of followership. *Followership is more than subordinates or partners just following a leader. Rather, followers through participation, training, modeling, mentoring, and coaching become acolytes of the original leader that in turn make their own acolytes as part of generational sustainment of the principles and culture of that original leader. In this, these followers generate followership. Importantly, this is not creating carbon copies, but free thinkers that also retain fidelity to the core concepts of the original leader's approach and methodology*.

The application of PAR in manufacturing in this research echoed the new thinking discussed by Kemmis et al. (2014) and required the researcher also to be pragmatic, refining the traditional AR model to produce a new model for PAR in manufacturing. The development of this model began in the preliminary projects (described in chapters 4 and 6) and was developed through the formal project (described in chapters 6 through 9) to its completion during analysis of the completion of the formal projects. This new model was required to fit the ever-changing needs of manufacturing and the pressures on staff and employees to perform 'now,' whilst still focusing on participative continuous improvement. This new model was developed through the research and is presented at 4.9.8.

Organizational Development: People at the heart of change

Successful business is driven by ongoing organizational development and leadership is the fulcrum of that development, (Schein, 2010). Business is people, even when business change is about process or product, it still impacts the team members who will sustain the change. To develop the organization, one must develop the leadership (Indra, 2018) and the people (CIPD, 2020). I define organizational development in Appendix 17.

Organizational Justice

According to Daniel Wester, (Cropanzano, et al., 2007), organizational justice has the potential to create powerful benefits for organizations and employees alike that include greater trust and commitment, improved job performance, more helpful citizenship behaviours, improved customer satisfaction and diminished conflict. Cropanzano, et al. (2007) states that members of teams that practice organizational justice sense when they are being treated fairly and respectfully. Indeed, one of the leaders in the formal projects when practicing 20/20 LEADERSHIP told me, "We must respect our people and their time."

Cropanzano, et al., (2007) say that justice defines the essence of the individual's relationship to their employer's distributive, procedural and interactional core dimensions. While organizational justice borrows from these older traditions, it has its own distinctions. Organizational justice is core to business development. However, I was unable to find organizational justice aligned with tikkun olam described in academic or other literature which is a current research gap. Both tikkun olam and organizational justice are people-focused and should be related to business. Tikkun olam motivates Jews to repair the world to hasten the arrival of the Messiah, whereas organizational justice is motivated by a compulsion to do the right thing within organizations.

As defined by Cropanzano et al., (2007), organizational justice is a personal evaluation related to the ethical and moral standing of managerial conduct. As tikkun olam is a mitzvah, the individual operating in an 20/20 LEADERSHIP environment needs to be centred in a place of higher standing than purely managerial conduct. Justice must matter to the leader as much as to the employee, (Cropanzano et al., 2001). Folger (2001) suggests that it is important to acknowledge that employees prefer justice because it allows them to predict and control outcomes that they are likely to experience from organizations. This compassion and fairness in actions and relationships extends to other psychological elements of work such as happiness and belonging, as is detailed in Maslow's hierarchy of needs. This helps with being able to form a model of leadership as the morally appropriate way others should be treated, (Folger, 2001).

There is more to organizational justice that just equity in dealing with employees. Cropanzano et al., (2007) also posit that we can apply three allocation rules to organizational justice:

1. To each the same.
2. To each in accordance with contributions.
3. To each in accordance with the most urgency.

Employees who are justly treated are more likely to comply with work-based policies, show extra conscientiousness and behave altruistically toward others, (Cohen-Charash and Spector, 2001). Indeed, workers tend to tailor citizenship behaviours carefully, doling them out to those who treated them justly and withholding them from those who do not. This justice can be a core value that defines an organization's identity. Organizational justice can also be the core of particularly difficult points in industrial life such as hiring, arbitration, disciplining and firing; if you cannot give people the outcome they want, at a minimum one can provide is leadership over a fair process. Tikkun olam goes further than this, demonstrated by a leader who will lead uncompromisingly with a view to social and organizational justice, repairing, nurturing, and building.

Cohen-Charash and Spector (2001) make the point that organizational justice helps managers to make difficult decisions more smoothly. This allows employees to have confidence that they are being dealt with fairly and that power will be used in accordance with principles that respect the dignity of all involved, (Cohen-Charash and Spector, 2001). In my view this is sound and tikkun olam aligned business advice so aligned with a leadership paradigm such as 20/20 LEADERSHIP which gives the leader a set of signposts or principles to help them be mindful of the right thing to do. This will consistently develop the team and therefore grow the business. Thus, the consistent and committed practice of organizational justice will lead to organizational development.

A K-A Reflective Practice.

In industry, there is a huge focus placed on understanding failure, but little time taken for reflection on a particular success such as is promoted in appreciative inquiry and appreciative leadership (Whitney, Trosten-Bloom & Rader, 2010) to also maximise the business potential that can be learned from success. This is unlike an RAF post-contact debrief when using deep reflection, we looked to systematize success and learn from failure. The 20/20 LEADERSHIP model should build a more positive approach to understanding business success and what works.

Authority and Influence.

As a practitioner, not only did I experience how the balance of authority and influence changed overtime but also when I choose to be directive, or participative and supportive (Avery and Ryan, 2002). My default to participative leadership changed as a result of officer training where participative action in decision making became a major focus in contrast to NCO training where more directive action to achieve the goal was the norm. As a senior officer and industrial manager, I had the authority and experience to move between these paradigms, the skill was in knowing when to do so. The ability to move between leadership paradigms was also necessary in this research and is an example of how leaders in manufacturing need to be adaptable to achieve the business objective. Table 1, illustrates examples of how I choose to balance authority and influence to achieve business objectives.

Paradigm	Rank or Position	Example	Learning
Directive	Senior Officer	Nuclear Weapons Systems certification	No room for participation
Directive	Senior Manager Manufacturing	Firing Janitor after threatening behaviour	Responsibility based in position
Directive/Participative	Senior Manager Manufacturing	When the main stock feed line to the paper manufacturing process corroded through, I directed all action using ideas and knowledge from my team to get the paper-machine back on-line ASAP as we were losing $10,000 per day.	Final decision for executing the plan and responsibility for the plan's success was all mine, having first taken technical advice from the team
Directive/Participative	Senior officer	Designing new packaging solutions for avionic modules.	I set the goal and as a team we completed RCPS problem solving and designed the solution together
Directive/Participative	Senior Manager	Root cause analysis of why the steam section failed.	I facilitated the RCPS and used the team's knowledge to

			understand the failure modes and corrective actions
Participative	Project Manager	Formation of a new Hebrew School	Completely participative, using the team's history and experience to overcome 20-year-old barriers
Participative	Senior Manager	Company B and C participatory projects.	The teams increasingly set the goals, planed the solutions, and owned the sustaining solutions that provided measurable business improvement
Participative	Senior Manager	Coaching	Using extra effort coaching staff to nurture them on the path to them becoming business enablers

Table 1. Balancing Authority and Influence

The ability and courage to choose which paradigm to use only comes with experience. My default is participatory leadership, (Van Wart, 2013) as it builds creative innovative engaged employees who sustain and embody continuous improvement. However, and as will be discussed throughout this research, the individual needs to find the motivation (Principle 12) to truly lead this way rather than merely manage. To lead in this way requires extra effort (Principle 11) and courage particularly when others do not understand that motivation.

Authority and Influence in Leadership.

Authority and power are usually not conceptually distinct and are considered extremes on a control continuum. Power is hypothesized as influence and social control, the former reducing and latter reinforcing authority (Grimes, 1978). Understanding the interplay of a leader’s authority and influence are key in any change project and understanding how authority and influence change over time are essential for successful leadership, (Rath, 2008). It was my experience that leaders in the military learn about leadership, including authority and influence over time through the act of leading and through relationships built with superiors, peers, and subordinates.

As a newly promoted NCO, I did not look to influence individuals; I would state what is necessary and measure success against compliance. When I was promoted to senior officer I had far more authority, but the focus changed from driving action through authority that I could legitimately use, to influencing achievement of the objective for the benefit of the mission and the people rather than simply directing. Figure 8, shows how over time these two roles of authority and influence changed both as I grew and as I had the opportunity to lead in a somewhat non-traditional way. This was more in line with the desire to develop others as well as being what I saw as a responsibility of military leadership. This is unlike my experience in the civilian world, where I have found there can be a lack of focus to develop subordinates. In contrast, it is the responsibility of every military leader to develop one’s successor, as one never knows when one could be posted or killed in active service. Thus, I have never been slow to look for potential in others and nurture their skill set explicitly to be able to take over my position when inevitably I move on, and to celebrate their success with them as the student overtakes the teacher.

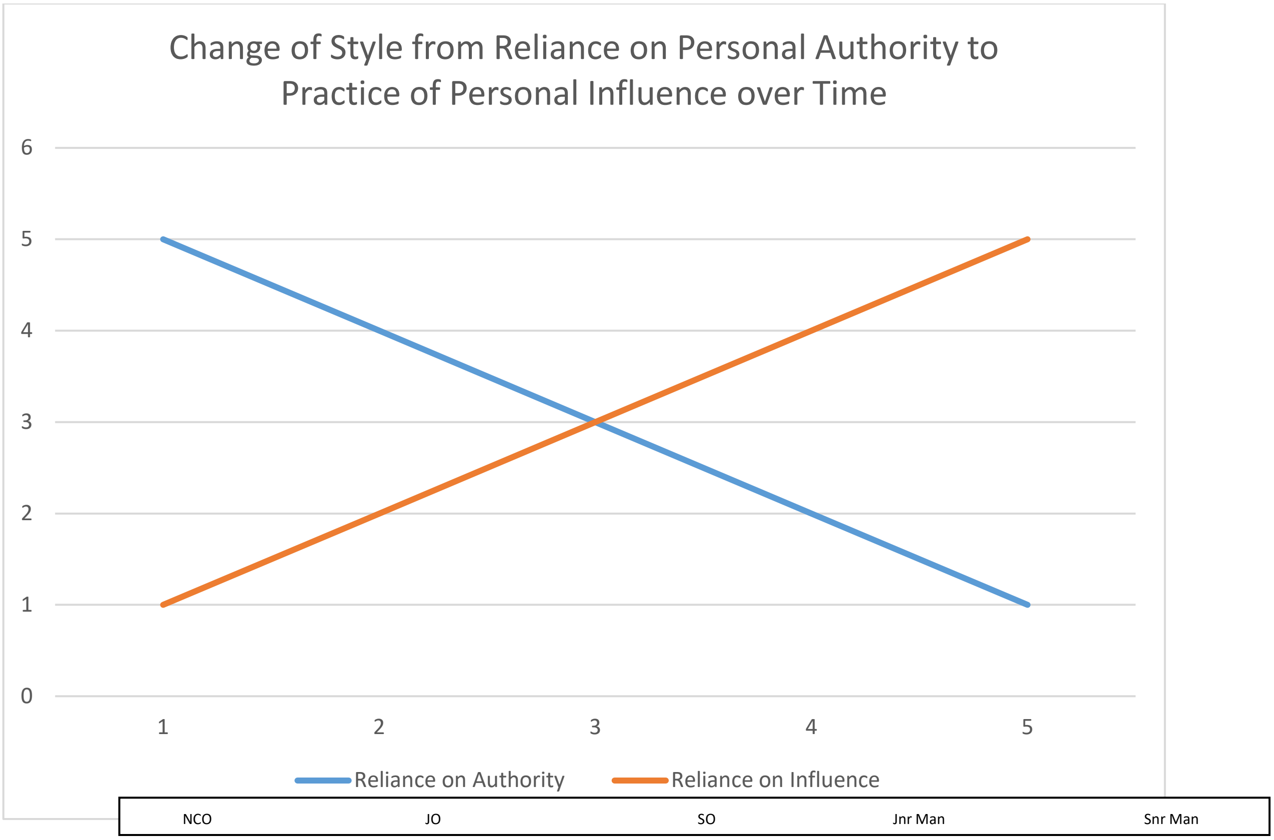


Figure 8. How Authority and Influence Change with Time. (Source: Author.)

In the synagogue, and this is somewhat counter-intuitive for me, we rarely look to grow and coach leadership; rather, the leadership nominating committee looks for fully formed leaders and rarely considers leadership potential in (say) a stay-at-home mom, when a CEO, lawyer, doctor or business 'leader' is readily available. In short, we often use the assimilated culture rather than our own Jewish culture in how we grow and select leadership. Therefore, with our own people having much to offer but no relevant experience, building a Jewish model as a signpost for those with little or no leadership experience is long overdue. There are specific leadership training modules available for those already in Jewish leadership roles who are about to become board members such as those from USCJ (2019) and Wexner (2019), but little for those who we want to take the first few steps into leadership. The 20/20 LEADERSHIP model will be particularly useful for these new emergent leaders. This has been the case in my current synagogue where the board in June 2019 began planning training for new leaders with 20/20 LEADERSHIP as the core.

1.2.4. Collaboration, Participation, Empowerment

Participation means having a say in the process and making decisions (Serrano-García, 1990). This is in contrast to collaboration which is merely working together. This idea of participation needs to be more fully explored in light of the aims of this research not only to introduce 20/20 LEADERSHIP as a new way of working, but to enable 20/20 LEADERSHIP to emerge as the leadership culture for ongoing and deepening participation and empowerment. The boundaries of power (Hayward, 2000) change with empowerment (Rappaport, 1981) (Zimmerman, 2000), whilst acknowledging that that such change in boundaries must still have limits. Interestingly, Dworski-Riggs and Langhout (2010) contend that these boundaries to participation are particularly relevant in the context of the hierarchical United States, as is my experience in the paper manufacturing industry. Several researchers (Greenwood et al., 1993; Selener, 1998; Serrano-García, 1990; Wallerstein, 1999) have discussed how power must gradually shift from the researcher to the community, PAR engages with how that power necessarily changes over the life of projects to grow the business. Arnstein (1969) states that citizen participation moves through essentially three levels: Nonparticipation, Tokenism and finally citizen power. Building on Aronstein's work, Wright et al. (2020) offer nine levels of participation when working in health promotion and prevention: Instrumentalization, Instruction, Information, Consultation, Inclusion, Shared Decision Making, Partial Delegation of Decision-Making Authority, Decision-Making Authority and finally to Community-Owned Initiatives. From my practitioner experience and for the purposes of this research, I am introducing a practitioner's model to describe levels of participation. This model transitions simply though Low to Medium to High level participation. This describes how levels of participation deepen with time, trust and the experience gained in self-determined participative decision making.

1. Low level Participation. Initially team participation is low and is essentially a minimal level of collaboration whist under training, familiarization and building a relationship with the researcher. Leadership also gives minimum empowerment to protect the business waiting to build up trust in the process and the team.
2. Medium Level Participation. As the teams become more competent and comfortable with the processes, they engage more with the change process under early participative control. Leadership builds confidence and trust with the team and begins to let the team take business impacting decisions within very defined boundaries.
3. High level Participation. Here, I as the researcher take on the role of a safety net where my participation becomes less and less as the team become fully competent in the mould of truly

participative and self-managing teams. Leadership function is now that of monitoring such as in daily contact by GEMBA[8] to help remove any barriers outside of the team's span of control. Leadership actively relinquishes power to the teams within the boundaries that business can accept (Hayward, 2000).

PAR capitalises on the insider as researcher in a number of ways (Carr and Kemmis, 1986).

1. PAR allows practitioners to understand practices from within, that then inform and orientate them.
2. PAR creates conditions to speak a shared language.
3. PAR allows practitioners to participate in the development of action, interaction, and practice.
4. PAR creates communities of participative practice.
5. PAR allows practitioners to meet the needs of changing times and confront their own practices when those practices are irrational, unsustainable, or unjust.

Thus, PAR not only creates real knowledge, but simultaneously increases the participatory education, action and development of consciousness that generates mobilization for action (Gaventa, 1988).

1.2.5. Participative Action Research Change Projects

The projects in this research are participative business change projects. Mitki et al., (2000) categorise change programs as limited, focused, and holistic. The projects in this research cover two of these forms: limited and focused. Limited-change programs address a specific problem, such as improving quality or reducing customer complaints, whereas focused-change programs identify a few key aspects, such as reducing defects on production work orders or of tolerance issues on a specific machine.

Buono and Kerber (2008) describe three approaches to change: Directed Change, where the plan is completely from and executed by the leader; Planned Change, where the leader influences how the goal is reached; and Guided Change, where a loosely defined project is watched over by leadership, but the execution draws on constructivism as a foundation for the team to talk about and engage with the change.

[8] A production floor-walk by senior leadership to meet with production supervisors and operators to understand production to target and what leadership needs to do to resolve problems outside of the span of control of the machine operators and supervisors. See page 244.

A K-A Reflection.

In these projects all three approaches to change were used in that the Directed Change (business need or context and purpose) was directed by my line-leadership, Planned Change (Lippet and Westley, 1960) in that initially I influenced and facilitated the plan for the projects, and Guided Change where I would step back during the project as the teams defined and refined individual tasks and began AR cycles themselves.

It is important to ensure that the researcher understands as fully as possible the present social and cultural state of an organization before building a plan to move forward or facilitate change. As an in-house researcher, I am already embedded in the company culture and know many of the key leaders, lending me a cultural advantage over a consultant brought in from the outside. Key leaders encouraged this research and gave permission to use my project to drive business improvement.

It will be shown that this final project brought engagement and growth to all members of the team using 20/20 LEADERSHIP and PAR. At the commencement of the first AR cycle in Plants A and B, many of the personnel exhibited 'below the line' behaviors as discussed by Connors et al. (2004), Figure 9. By the end of this cycle most were exhibiting the above the line behaviors that Connors et al. (2004) state are examples of engaged corporate citizens. Highly functioning business leaders make corporate citizenship a key priority, (Mirvis and Googins, 2006). Successful 20/20 LEADERSHIP will engage individuals as corporate citizens in the mission of sustained business growth. Bettignies in (Mirvis and Googins, 2006) makes the point that terms such as citizenship and sustainability incorporate notions of ethics, philanthropy, stakeholder management, and social and environmental responsibilities.

The aim of using 20/20 LEADERSHIP is not only to improve business performance but also to change how individuals learn about work and how they experience work in their business community. This change in behaviors was seen in the transition to 20/20 LEADERSHIP from 'below the line' to 'above the line' behaviors, Figure 9.

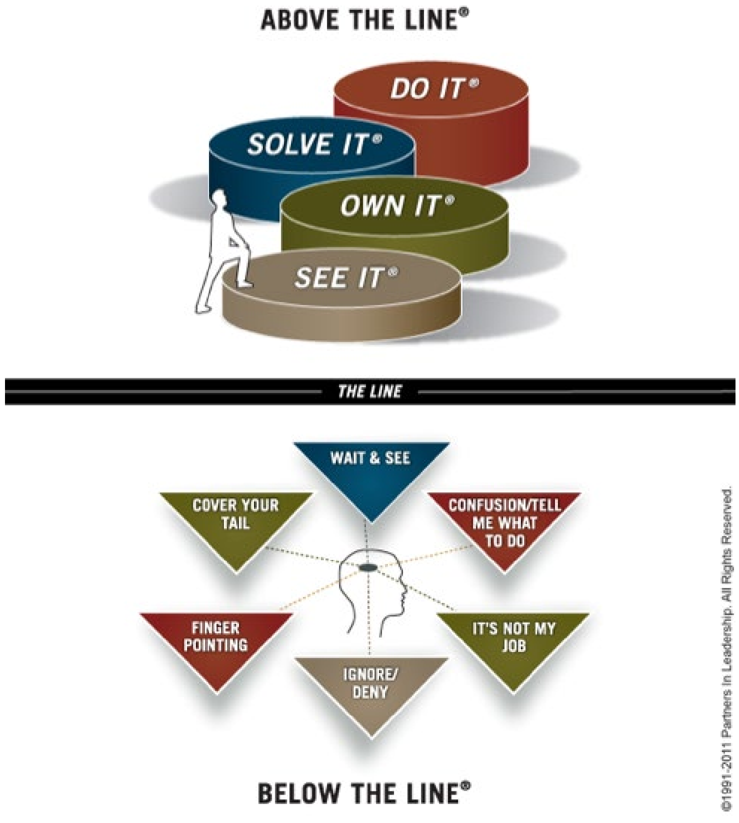


Figure 9. Building Engagement (Connors et al., 2004)

1.2.6. Positioning of PAR in Manufacturing

Practitioner reflection on why there is a lack of literature on the use of PAR in manufacturing and thus why this research is distinctive?

This reflection is restricted to my personal professional experience of working in a specific niche of paper making and processing and does not attempt to satisfy any notion of generalizability to the rest of manufacturing.

I was only able to find two examples in the literature of participatory action research being undertaken in manufacturing as a vehicle for business improvement, particularly where power for change was in the hands of the employees. Both of these references discussed limitations due to inconsistency of commitment of senior management and constant changes in culture due to changes of ownership; these echo my experience particularly in Companies A and C. To provide a context for the current research, it is essential to understand the distinctive nature of my experience with paper manufacturing in the USA.

In 2018, the first quarter manufacturing surge for book and folder covers to prepare for the expected back-to-school demand of the third quarter did not happen, a first in the memory of staff who had been at the company for up to thirty years. This is important, as the only means available to stay in business in a shrinking sector was to maximize production output, but there was little demand for that production. Thus, to sustain business, costs had to be slashed and with labour being a major cost driver that meant employing the absolute minimum manpower and maximizing any remaining output of the machines 24/7 on the minimum number of machines. This required laying-off staff and often with little notice.

If a machine needed three people to run it, then three people had to be at their positions for the entire shift other than for toilet breaks which were strictly monitored. Furthermore, temporary unskilled labour on a minimum wage were continually brought in, as those experienced personnel with initiative and ambition resigned, seeing little future in staying with the company. Additionally, as medical insurance in the USA is only paid by employers to permanent staff, temporary employees moved quickly to any permanent job that they could secure where an employer will supply medical cover. Because of this, we lost potential good temp-to-hire employees to the fast- food restaurants before they could transition on to the hire program. These fast-food jobs also require far less manual labour with no heavy lifting, and employees do not have to work in such hot and dirty environments as paper and packaging machines. Our manufacturing employees, in contrast, had to eat their meals at the machines whilst on an eight- or twelve-hour swing shift, and then only if they could make time due to the highly manual nature of their work.

Thus, it can be seen why manufacturing, particularly at Company C, may not be considered an ideal environment for PAR. Personnel were required on shift to run machines 100% of the time and were not available for PAR meetings without complex forward planning by leadership. This is in contrast to the professional fields of nursing and education where PAR is more frequently utilized, where meetings can be readily planned during the working day, and where the research of McArdle (2008 pp. 650 - 653) was carried out using PAR in well-appointed offices and conference rooms.

Coaching often took place at the paper machines in short bursts and under the considerable difficulty of trying to motivate these individuals, even when they did not know if they would have work for the next day or an income, since they were paid on an hourly basis.

Thus, using PAR in paper manufacturing as in internal senior manager/researcher is highly distinctive, particularly when compared with the research of McArdle (2008) who was an external researcher working in a team of researchers with professional employees.

1.2.7. Chapter Conclusions.

Chapter 2 showed that the context and purpose in an action learning cycle is determined not by the researcher but by the business. This sets the tone of this research as a work-based learning exercise anchored in both business and academia. For PAR to be useful in business it must drive business improvement by being consistent and enabling continuity, and thus PAR must be adapted to meet the need of business leaders who are agreeing to PAR being used in their businesses. Empowering workers brings growing levels of engagement that builds the individuals and their businesses. Using PAR in this way with 20/20 LEADERSHIP is new to this researcher and in the literature. This was challenging, but will be shown to have had a positive impact on business.

Chapter 3

The objectives of Chapter 3 are:

1. Discuss how the formal change projects will be conducted.
2. Discuss why Reflexive Thematic Analysis was chosen as the main method of qualitative analysis.
3. Discuss the methodology for the presidents focus group.

1.3.1. Qualitative Research

The approaches and selection criteria of the type of qualitative research (Patton, 1990; Silverman, 2006; Teherani, et al., 2015) to adopt are numerous, each providing utility within specific applications. Among others, Gummesson (1991) discusses qualitative analysis in management research. Strauss and Corbin (1998) provide a foundational discourse on techniques for developing grounded theory, and Braun and Clarke (2006) have become key in the development of Semantic (focused on what is said) and Latent (asking what the meaning is behind what is said) Reflexive Thematic Analysis (RTA) which will be demonstrated in this research. Semantic RTA is the most appropriate method to be utilized in building the 20/20 LEADERSHIP model due to its documented flexibility when used in PAR (Braun and Clarke, 2016) and its ability to have the researcher knowingly construct themes, that in this case will then be used to build a model for leadership. Latent RTA will be used to test the success of using 20/20 LEADERSHIP, interpreting and understanding how the model has changed people and the wok environment.

1.3.2. Research Methodology for Presidents Focus Group and Design of the 20/20 LEADERSHIP Model

"Meaningful reality is understood as constructed between persons in interaction. This shared epistemology leads to viewing data as mutually constructed by the participants to understand the analytic product as a set of interpretations," (Wertz et al., 2011 p.308). In social science research, a qualitative construct is far more complex and nuanced than a variable in traditional quantitative research. Though the social scientist must be aware of this difference and be able to analyze these social constructs, these constructs may have parameters that are not immediately obvious but may only be revealed as the qualitative research unfolds particularly within a PAR environment.

Constructs that impacted this research included individuals' attitudes to work as a result of previous change initiatives (many had come and gone); changes in personnel causing changes in team dynamics (a new production manager came and left at Company C Plant B during this study); levels of commitment of individuals to this project (based on history, length of time with the company); individual understandings of knowledge (expanded due to their interaction with PAR) and the elements that build relationships (one of the 20/20 LEADERSHIP principles and a focus during PAR). Also, because individuals talk to each other, working on a PAR project with one team has impacts on other teams even when they are not a part of the project; thus, traditional control groups and cross-sectional studies were not possible (Blumberg and Pringle, 1983; McNiff, 1988 p.4). This speaks to the complex task of measuring change in a social context.

1.3.3. Thematic Analysis

Joffe in Harper and Thompson (2012, chapter 15) states that Thematic Analysis (TA) has developed from its first principles of the 1950s to what is now described as a method in its own right. TA organizes, describes, and offers a contextual interpretation of meaning (Clarke, 2017). Reflexive Thematic Analysis (RTA) (Wertz et.al., 2011; Braun and Clarke, 2006; Braun and Clarke, 2013; Braun et al., 2017) and Braun and Clarke (2018) add the element of reflexivity particularly aligned with PAR as the method used in this research. Reflexivity acknowledges the effect of the personality or presence of the researcher on what is being investigated. This causes the researcher to ask, what do I bring to the data based on my history, culture, experience, in this case as I view the study through the prism of leadership practice and Judaism. In this research, I adopt the role of constructionism which has its roots in an interpretive tradition. This promotes understanding that which lies behind what people are doing and thinking, and why they act and react in the way that they do.

Importantly and repeatedly, Braun and Clarke emphasize that within RTA themes do not 'emerge' from the data as in other qualitative methods, rather themes are generated by the researcher actively and knowingly. RTA is a uniquely flexible and non-linear approach that is both messy and interpretive (Braun et al., 2017), that aligns with my experience of operating PAR in the manufacturing industry.

Braun and Clarke (2018) describe a six-stage process for TA.

1. Actively read all the data identifying items of potential interest.
2. Generate a first round of codes, being open that they may change.
3. Generate initial themes.
4. Review the initial themes.
5. Define and name the themes as rich text and not as single word labels.
6. Produce the report, being mindful that even at this stage themes can be dismissed, amalgamated or new themes may be introduced.

The 20/20 LEADERSHIP model will be inductively constructed using semantic thematic analysis and I will be mindful of the phenomenological aspects of the research, that is to be mindful of how my participants give meaning to the research through how they interact with the world around them and add value from their lived experience. RTA is also ideal for this study because meaningful data can be created from small homogenous groups, (Braun and Clarke, 2006) as will be the case with the Jewish Leaders' Focus Group.

1.3.4. Jewish Leaders' Focus Group

Purpose.

The purpose of the Jewish Leaders' Focus Group is to add senior Jewish leader's experience to the Jewish leadership discussion, together with personal practitioner experience as is expanded in Appendix 3, in order to build the 20/20 LEADERSHIP model.

Method.

Ten former synagogue presidents, each having completed at least one term each as president, were invited to attend a guided focus group. Each president serves two years as an executive vice-president (my position at the time of the focus group), two years as president and then two years as immediate past president. The focus group presidents between them had completed 13 terms as president out of the total of 25 possible terms over the 50 years of the synagogue which represents a 52% return in terms of tenure, or 78 combined years of synagogue leadership. Two of the former presidents were female; all were university educated; seven were in their 70s and 80s. The presidents not available had moved away or had died. At the beginning of the focus group, I explained the session would last for about two hours and would involve a discussion around six open questions with all views welcomed. I explained that the purpose of the survey group was two-fold. Firstly, to understand how the presidents had led in the synagogue and in their secular professions as Jews in preparation for me taking on the role of synagogue Executive Vice-President. And secondly, to use that data to inform a model for Jewish Leadership that I could use in my DBA. I informed the group that nothing said would be attributable in the project report and asked permission to use their unattributable comments in my research. They unanimously agreed to participate.

I wanted to know what had worked in synagogue leadership in the past and what was unsuccessful. I facilitated the discussion, and all were encouraged to provide frank and honest input. I already knew most of the past-presidents having built relationships with them over the five years that I had been a member of the synagogue.

Focus groups enable the researcher to study the experience of a group in a more natural conversation pattern than typically occurs in a one-to-one interview. The focus group is used for learning about groups and their patterns of interaction. An advantage is their low cost compared with surveys as one can get results relatively quickly and increase the sample size of a report by talking with several people at once. Another advantage is that they can be used as an occasion for participants to learn from one another as they exchange and build on one another's views so that the participants can experience the research as an enriching encounter (Romm, 2015). The fundamental difficulty with focus groups is the issue of observer dependency: the results obtained are influenced by the researcher or his or her reading of the group's discussion raising questions of validity. Focus groups can be one shot case studies unless they are repeated (Nachmais and Nachmais, 2008) and can also create issues of external validity and group think. However, these disadvantages can be avoided when the researcher is aware of them, plans, and enters the focus groups prepared to combat these potential pitfalls.

Braun and Clarke (2006) caution that the researcher must be mindful that transcription of codes and themes carry the theoretical assumptions of the researcher. I will have to be reflexive based on my previous experience, expected outcomes, desired outcomes, expectations of interviewees etc. In this analysis there are no pre-codes, and all themes will be the result of this analysis only.

A K-A Reflective Practice.

The make-up of the presidents focus group reflects the make-up of many US synagogue boards: all graduates, all in the professions, and mostly men. Interestingly, I am one of only two individuals on the board that are not of the traditional professions. The people on the boards have a wealth of education, experience, and leadership, but do they think about leading Jewishly?

As my first attempt at running a qualitative focus group, I acknowledge on reflecting back some 4 years later that there is room for improvement. This includes collecting in detail how many agreed or disagreed with every point, that I could have been more proactive in getting all to participate equally and it would have been advantageous to record the session or get someone else to take notes rather than doing this myself. I spent considerable time working with my university advisor forming the questions but then stuck too rigidly to those questions impeding the flow of the discussion. I learned much from this focus group, and subsequent interviews and focus groups benefited from having a more formative approach.

1.3.5. Focus Group Question Guide

A question guide was constructed for the Senior leader's focus group of open questions to begin discussions and encourage as much sharing as possible. The questions were designed to guide the discussion on Jewish Leadership but not so directed as to limit the discussion. I needed the group to reveal their own discussion points that would then be worth investigation and further questions:

Question 1. How did we get to our current leadership model?

Question 2: What is unique to Jewish Leadership?

Question 3: What went well in your period of presidency and what should not be repeated?

Question 4: What is the single biggest lesson learned by each former leader?

Question 5: What should we never change?

The data collected at the focus group is presented in detail at Appendix 3. This data provides a major input to the RTA from which the 20/20 LEADERSHIP model is derived.

1.3.6. Chapter Conclusions.

This chapter contains major elements of learning that underpin how the formal change projects will be conducted. Qualitative research and the chosen methodology of RTA are new to this quantitative engineer and will be challenging moving forward. A major learning point, which perhaps I should have anticipated was the mechanics of successfully running a focus group. I underestimated the challenge of taking notes, maintaining eye contact with the whole group to keep each one engaged and being able to focus on what individuals were telling me whilst trying to think ahead at the next level of questioning.

This is a valuable lesson that I can take forward to future interactions in this research and future opportunities.

Chapter 4

The objectives of Chapter 4 are:

1. To introduce the use of preliminary projects in social research.
2. To implement a multiple cycle preliminary PAR project to test the core principles on which the 20/20 LEADERSHIP model will be built.
3. To test the efficacy of PAR as a vehicle to plan and deliver change.

1.4.1. Preliminary Projects

Two preliminary projects were completed prior to the two formal projects that were completed in this research. The preliminary projects were the formation of a Hebrew school and a Company B quality improvement project. Preliminary projects have two purposes (Mapotse, 2015). Firstly, to ascertain the viability of the research so that the researcher does not waste time with an investigation that is of no merit and secondly as a dry run of the research method to be applied. The formation of the new Hebrew school explored the use of PAR as a research method and the applicability of the core Jewish principles of tikkun olam, chesed and tzdacha as a leadership construct for problem solving. A preliminary project has the benefit that if the core concepts did not work, I would be able to redirect the study or indeed end the study if the early model did not meet the need.

1.4.2. Preliminary Project 1: Cycle 1. Formation of the Community Hebrew School

Context and Purpose

Around the same time as the President's Focus group and before the analysis from which the 20/20 LEADERSHIP model was constructed, I had the opportunity to lead a Jewish community project. This would be an ideal opportunity to start to put the theory that I had gathered into a preliminary project. This preliminary project would also have the benefit of the first application of this Jewish model in a Jewish community project. Had time allowed it would have been useful to go into the school project with a fully formed model rather than just understanding its three core concepts. However, real world practice is not always linear.

Business Need

For more than twenty years, the local Jewish community, had tried to start a new school to bring together the orthodox, conservative, reform, and non-aligned Jewish children into one school for the purpose of learning liturgical Hebrew. For a number of reasons, this objective had never been realized. The Rabbinical Council[9] had decided that the community should try one last time as the school was still needed and the community youth would benefit from learning Hebrew together, building relationships across denominations.

I attended a community discussion in November 2015. The group asked for a plan that would see the school opened by September 2016 to be populated by the known 110 children brought together from the community and the current individual denominational schools. This project would only succeed by bringing together the community that was currently separated on denominational lines (Novak, 1988). This was an opportunity to build bridges between the denominations in the spirt of social justice (tikkun olam) (Principle 1) and ideal for my first 20/20 LEADERSHIP PAR project. Interestingly, this would mean the first outing of the 20/20 LEADERSHIP model would be to provide Jewish leadership back to Jews. I was motivated to offer my services as the pro bono Project leader and the Rabbinical Council accepted my offer (Principle 11), (Principle 12).

I asked the synagogue representatives to go back to their communities and ask the following two questions. Firstly, why had the efforts to start the school over the last twenty years not been successful; secondly what would each congregation want from the school if was successful this time around? The output from the two questions would provide me with the context/business need to begin discussion at the first project meeting. The solution would need community consensus and would only be solved through learning the needs of a socially bonded community. There are advantages and disadvantages to practitioner or work-based-learning as identified in Cook (2007). The advantage for me on this occasion was a ready opportunity to use PAR and 20/20 LEADERSHIP. The central disadvantage was that, due to the timeline, it was bound from the outset to complete this phase of DBA study and have the school open on time.

[9] A council of all the city Rabbis.

Planning Action

The plan for this first cycle was to form the participatory action research (project steering) team using 20/20 LEADERSHIP, to listen to the feedback from each synagogue and then to plan the way forward. As a PAR team, we would have to reach a consensus of all the elements that needed to be in place to satisfy the needs of the entire community. Importantly, if we were to be successful where others had failed, we had less than a year to begin the school. This was a challenge, but to keep up the energy and focus for much longer could have led to prevarication and complacency, that may have caused us to fail as others had before. I felt the team had to have a common vison (Principle 8) for the school, based on the need of the children to learn Hebrew to avoid being swayed by historic barriers.

Taking Action

Leaders set the vison and overcome the barriers (Principle 4) in exactly the same way as Moses had the vision of the Promised Land and set about overcoming the barriers of pharaoh and slavery. At the first meeting as project leader, the team members gave feedback on the two questions I had asked at the first exploratory meeting. From the feedback, it transpired that the community had not been successful in starting the school for a number of reasons. These included which denomination's education syllabus to use, which denomination's liturgy to use, where the school would be located and which denomination's kosher[10] food policy to follow. Through honest and respectful (Principle 6), (Principle 9) dialogue promoting the tikkun olam bridge building element of 20/20 LEADERSHIP and chesed (Principle 3), working with kindness, we saw kosher food policy and as being the biggest barrier. We decided to work on the other issues first to get 'a win on the board' (Principle 8) focusing on writing a vison statement and building relationships.

The team eventually had a total commitment to focus on education but retained concerns that the kosher issue would be the barrier to success. We had to do the socially just thing first and use that energy to work through the barriers. I reinforced the story of getting Pharaoh to release the Israelites from Egypt as once past this barrier we could deal with the trials of the dessert. This was bringing a Jewish story to Jews to remove barriers and repair what had been broken between the communities for twenty years. This was truly putting them at the heart of their own learning, with each knowing the others had for the first time

[10] This and other Hebrew terms are explained in Appendix 21.

agreed that the focus should be education. Participatorily, we drafted a mission statement which the members took back to their own synagogue boards to build consensus. They were already taking the leadership role and responsibility for success for the future of their school from me and into their own hands which would be essential for long term sustainment. This was the first time I considered that the traditional four step AR cycle would not be efficient and started to build the new 7 step PAR process that developed though this and the other projects into the fully formed model in Chapter 9.

A K-A Reflective Practice.
In this cycle the team quickly took on the leadership from my training and continued to develop through mentoring and coaching. This was vital to sustained success as I would eventually be moving on and success of the school could not be contingent on my presence.

The PAR team kept true to 20/20 LEADERSHIP and the vision they developed, selling the vision, and replicating key discussions that we had started in committee, in their own communities. Over the next two meetings working participatorily between the separate synagogue boards and between ourselves, we agreed a vision statement.

- The syllabus would focus on Hebrew liturgy and understanding Jewish festivals.
- The school would need to be cost neutral to the parents and the synagogues.
- We would aim to embrace technology from the outset rather than hard copy books.
- Education quality had to be at least equal to that in the individual congregational schools.
- The secondary purpose would be to build relationships between the communities' children.

Evaluation

The team achieved success focused on the goal of education, not the historic denominational barriers. More importantly, this success generated the energy that was needed to overcome the barriers we knew we were yet to address. We had proved that leaders working to do the right thing can build bridges through relationships. Once I got Jews to think like and then work together as Jews, getting everyone to participate in the project in a spirit of tikkun olam became easier. An important 20/20 LEADERSHIP lesson for the next and subsequent AR cycles was that it is easier to come together on what the participants have in common, rather than trying to build consensus out of difference. I consciously took things very slowly with the focus on building the team and a quality of relationship (Principle 2) necessary according to Shanni and Pasmore in Coghlan and Brannick (2013 p.4) for a successful AR project.

This project is no different to others in social science in that it is difficult to extricate one cause in a social science experiment and categorically correlate it to a specific effect (SAISD, 2019). There are overt and covert influences on societies and individuals within those societies that contribute toward eventual outputs. Nationally at the start of this project, Jews had started to come together due to the rise of anti-Semitism across the USA (Goodstiein, 2018). The result of this was openness to new relationships that many Jews in the community had not seen for some time and this had an impact on the readiness to work together to build the school. There was also my suggestion to have a dedicated project group to lead this work rather than just making it a sub-function of another committee. I also acknowledge that a different leadership model may have achieved the same end, but those used in the past twenty years had not been successful and this study is not a comparison with other models.

Key learnings from AR Cycle 1

The emerging 20/20 LEADERSHIP model promoted relationship building focused on what individuals have in common, rather than what pushes them apart. The preliminary project gave me the confidence that the three Jewish core concepts of 20/20 LEADERSHIP would be worth pursuing. PAR built team ownership of solutions, and thus would be useful for team growth and problem solving. Engaged empowered individuals can find solutions to problems using 20/20 LEADERSHIP in a PAR environment even to longstanding problems. The 20/20 LEADERSHIP mentor must move at the pace of change that the team can absorb. 20/20 LEADERSHIP can be the vehicle to build a quality of relationship where every interaction is an opportunity for growth (Principle 2).

1.4.3. Preliminary Project 1: Cycle 2. Community Hebrew School

Context

Having built the mission statement, we now turned to the kosher food policy. Kosher policy is explained in Appendix 16. Why had kosher policy for the school been a twenty-year barrier? As with denominations of other faiths such as Sunni and Shia or Methodist and Roman Catholic, the various denominations of Judaism have different interpretations of the same texts that over time have brought about separate understandings, positions, organizations, and doctrines. In Judaism, one of these major areas of difference is rules related to what food can be eaten and in combination with what other food.

Business Need

A solution needed to be found to the kosher food barrier that had held up formation of the school. This would not be about compromise but about reframing the problem and doing so in a Jewish way using the 20/20 LEADERSHIP model. 20/20 LEADERSHIP calls for us to reach out and repair what is broken. What was broken was disparity between the synagogues in kosher doctrine. Success would bode well for application of the model in a future secular context.

Planning Action

It was decided to build on the success of the mission statement to build consensus between individuals on a working kosher policy (Principle 1), (Principle 8). This would be a highly participatory conversation between the PAR team and the boards at the individual congregations. We would also agree on a location for the school to accommodate 110 children and then remove any other barriers. This action would be undertaken through PAR.

Taking Action

Almost from the outset, I could see only one way past the stalemate of the kosher policy and that was for all to accept the orthodox kosher doctrine as the most stringent that would also not insult any tradition, but the team in this PAR approach needed to find their own solution. The awareness that I could not promote my solution over others was particularly important. In ongoing discussion, I continued to reinforce the 20/20 LEADERSHIP model even when only one person from each denomination came to what were becoming increasingly difficult meetings. I particularly focused on nurturing tikkun olam for the benefit of the potential school students (Principle 1). I reiterated that leaders remove barriers (Principle 8) and that by maximizing the team with humility and respect (Principle 9) we could achieve the goal.

In discussing the kosher food issue at the fourth meeting, it seemed that each thought the other synagogues would be the problem. We carefully considered each other's perspectives on kosher law. There was still some drawing up of defensive positions; however, I sensed a warming compared to previous meetings and we did have the 'win' of an agreed mission statement. Three of the four rabbis were present with the cantor representing the fourth community. This began as a difficult meeting where I had to constantly keep people focused on the school mission, and with all the respect I could muster (and putting my own denominational bias aside) be considerate of denominational dogma whilst getting these well-meaning people to look past their own tradition. The purpose of the school was to promote education and the longevity of the combined Jewish community, not individual dogma that contributes to the vanishing American Jew (Dershowitz, 1997). The team considered several options including that this problem was just too difficult, but it was agreed that this was not an acceptable option. At one point they discussed having a combined dining hall with food being prepared in separate areas and the children eating at denominational tables. This did not promote an inclusive education or community atmosphere; in fact, it promoted division. Another option was that students bring their own food and sit in their own areas to avoid food contamination. Again, this does not promote inclusivity. Thirdly, just purchase premade kosher snacks that were acceptable to all; however, these were rarely nutritious, and many parents would not buy these for their kids at home.

The discussion continued to be lively whilst I focused the team on the mission statement using the 20/20 LEADERSHIP model. Using Jewish theological concepts put me in a somewhat uncomfortable position as I felt less qualified than the four Jewish Education Directors, three synagogue presidents, three cantors and three rabbis around the table. However, as this was about PAR and facilitation it was not for me to take the lead. Furthermore, it was the team and not I that would have to live with the solution for the life of the school. It was then that the Reform Rabbi offered that having looked at all the other options, and failure not being an option, that nobody in his community would be offended if all followed the orthodox kosher tradition. Children from his congregation would eat whatever was acceptable to our orthodox community brethren who we all understood could not compromise. The Conservative Rabbi then observed that this would itself provide a teaching point for all our children so they would learn from their orthodox playmates and he would support the orthodox solution for his congregation.

I encouraged each group to go back to their synagogues and ask their peers if they would all accept the most stringent standard of the orthodox synagogue for all of their children and think particularly about what was the 'right thing' to do for the benefit of the community and for our children. In the next few days, I received replies from all the attendees at the meeting that they would all accept the orthodox kosher standard as that for the school. This was a success after twenty years and the largest barrier had been removed by my project collaborators. It came about by moving past dogma to community. This is an extremely valuable lesson with a direct analogue in industry.

We then turned to the next problem of location. The president of the oldest Conservative synagogue spontaneously stated that his community had already agreed that they would offer his education block as the home of the school for two years. This was accepted and the problem solving gained an energy of its own. The reform Rabbi offered the next two years but would need considerable help with hosting 110 children due to him having the smaller premises. We now had the first six years covered. The orthodox rabbi stated it was doubtful if his synagogue would ever be able to host 110 children as they only have a small building, but his congregation's children would fully support the school. By this time, there was an atmosphere of positivity and the location decision had been made completely without my input; the school would be on permanent rotation between the three largest synagogues. Over the next four months the committee obtained the necessary grants, cleared the outstanding entries on the action plan and the school opened as planned in September 2016. After the meeting, I received remails that all the synagogues accepted that they would follow the most stringent Orthodox Kosher food policy. Success. The final mission statement had no mention of kosher catering and while I was associated with the school, kosher doctrine was never again an issue. The mission statement did evolve before the school opened with the final statement reproduced in Table 2.

	Mission Statement
1	The school is to provide a program of liturgical Hebrew education from grades 3 to 7 at a standard equal to or better than that which can be provided by the individual synagogues. This will be achieved by maintaining the focus on providing excellence in teaching standards, curriculum, and providing an environment that engages children with their learning experience.
2	A secondary purpose is to build a sense of community across all Jewish children in the area.
3	The school is to be cost neutral to parents and synagogues.

Table 2. SCHS Mission Statement

Evaluation

The vison of providing Jewish education was more important than the dogmatic distraction of denominational cafeteria choices. The success of starting the school was reached by enabling the team to solve their own problem using 20/20 LEADERSHIP and PAR whilst honouring their separate cultures. This success became a step-off point for many future joint ventures that included the first weekly combined service of all the synagogues, and a cross-denominational community steering group that has continued three years later.

The success of this project was described by one of the Rabbis as "a miracle that had moved past twenty years of impasse." A second Rabbi acknowledged to me privately that he and the other clergy had realized part way through the project what I was doing in making the committee think about what we had in common as Jews and not denominationally, and that this had made the difference. I began to think about how Jews had forgotten to operate using Jewish principles that I had brought into 20/20 LEADERSHIP that secularised would also benefit my industrial work. In the RAF, irrespective of the situation we were also successful when we pulled together and followed our military Torah i.e., Standard Operating Procedures (SOPs). This is a valuable 20/20 LEADERSHIP lesson to bring to my industrial work that in future AR cycles, leading according to core principles, finding ways to use diverse points of view positively and promoting growth for everyone are all more important than winning points.

The school also received external recognition. "Around the USA some (Jewish school) communities are revisiting this model of community. The students thrive in part because there is a critical mass for meaningful conversation and the kids appreciate getting to know their peers from the other synagogues. A major endeavour in this regard was the recent creation of the Community Hebrew School." (Leff, 2019 p.2)

This cycle demonstrated several 20/20 LEADERSHIP principles one of which was that when we interact, we must build each other up (Principle 1), (Principle 2). Leaders must focus on the vision and remove barriers (Principle 8), build bridges (Principle 7), and set expectations (Principle 5). We need to take the time to understand the other's point of view and that diversity can be a strength when not seen as a threat. Most importantly, teams can find their own solutions when facilitated by an enabling model that ensures they will not be held captive to dogma.

A K-A Reflective Practice

This preliminary AR cycle not only gave me confidence in the concept of the model but also confidence in PAR particularly as I had to consciously step back to let the team find their own answer. It reinforced the emerging principles of 20/20 LEADERSHIP and that the power of PAR was enabling others rather than giving them a solution. It also taught me that even an entrenched barrier can be removed by being pragmatic, using mutual respect, and ensuring that every interaction is an opportunity for growth. Also, that denominations are a recent human construct and not the core of our 3500-year tradition.

Leading from behind was something I had practiced in the RAF when everyone was completely on mission. This civilian project though was different and had started for some from a lack of belief that a solution could be found. This solution obtained with 'the power of the many,' (Surowiecki, 2005) *can now be carried forward to the next AR cycle. This also caused me to reflect on how far the word dogma has moved in English from its original Greek "to seem good or think"* (Dictionary.com, 2019) *to mean intolerance and ideas that are immovable,* (Dictionary.com, 2019)

Key learnings from AR Cycle 2

Leaders must focus on the vision and set expectations to keep the team moving forward. The team will engage when they see the outcome will take their personal concerns and conditions forward. The team can find their own solutions when given the trust and space to explore options. 20/20 LEADERSHIP can be an enabler when making 'traditional' leadership subservient to doing the 'right thing'. Leaders can guide through dogma to achieve the team objectives.

1.4.4. Chapter Conclusions.

The preliminary projects not only delivered the business objective and overcame a 20-year struggle to open the new school but also showed that the principles of tikkun olam, chesed and tzdacha could be used in problem solving using PAR. This was particularly interesting as it brought a set of Jewish core principles to a Jewish problem using a multi-denominational Jewish team. This preliminary project's success bodes well for a secularized and operationalized leadership model that could be used in manufacturing.

Chapter 5

1.5.1. Constructing the 20/20 LEADERSHIP Model Using Semantic Reflexive Thematic Analysis

The objectives for Chapter 5 are:

1. Describe the mechanics of using Reflexive Thematic Analysis (RTA) as a method of qualitative research.
2. Using RTA, construct the themes that will become the principles of 20/20 LEADERSHIP.
3. Take the derived principles through a process of secularization and operationalization.

The data set for the semantic reflexive thematic analysis comprises chapters 1 through 4, and Appendix 2 and 19. Semantic Reflexive Thematic Analysis followed the six stages of Braun and Clarke (2006) to construct the 20/20 LEADERSHIP model.

1. Actively read all the data identifying items of potential interest.
    a. On reading the entire text several times, multiple themes became of interest, such as authenticity, honesty, relationship, and kindness. These themes quickly confirmed my attention on this being a people not leader focused model as was to be expected, as this practitioner research and my practice is people as the drivers of business success. It is important here to acknowledge the impact of reflexivity in the way I interact with the data without any precoding.

2. Generate a first round of codes, being open that they may change.
    a. I began with line-by-line open coding of the entirety of Part 1, Appendix 2, and the comments for the Synagogue Presidents Focus Group with no code book, the codes being entirely driven by analysis of the data corpus. On completion of open coding, I was somewhat overwhelmed by the sheer amount of data with 286-line items of code. An example of this coding that became the theme of kindness is presented at Table 3. Had this been a collaborative project with other researchers , this would have been the time to compare the codes based on their experience and practice to add value and

seek other perspectives. However, as a single coder, codes began to stand out quickly as themes and memos developed to recognized relationships.

3. Generate initial themes.
    a. Initial themes were generated using axial coding. Axial coding is the process of linking codes into families of initial themes based on context, textual equivalence etc. This axial coding is highly subjective when completed in isolation and as seen in step 2. for future analyses, I see the value of coding with collaborators. In axial coding, I also saw how some of the themes were achieving data saturation, i.e., the frequency of the same code coming out of the data set. Axial coding generated initial themes and repetition began developing rich themes. Axial coding is often carried out using post-it notes that are moved around on a wall as themes are suggested, merged, changed deleted etc. With my engineering bias and due to the large amount of data that had to be manipulated by this single researcher, I decided to utilize excel as a sorting software. Using the alphabetic sort function, this enabled very quick and iterative sorting over a four-day period. I was mindful not to drive out nuance in the data due to the need to settle on key words to drive the sort, and amended key words as was necessary, but constant mindfulness helped to work toward a truthful solution. With such a large data set and having to make decisions reduced to key words, a collaborator would have been useful at this point as a check on not stretching the data away from its original meaning.

       An example of the development of a subset of the themes is in Table 3. Though there are only 9 codes used to derive kindness as a theme (Principle 3) compared with (55) for (Principle 1), as thematic analysis is not content analysis it does not require numbers of codes for a theme to be valid (Vaismoradi et al., 2013).

4. Review the initial themes.
    a. These initial themes were again reviewed, grouped, and regrouped several times using the excel sort function, before finally being assimilated into developed final themes. I also took the opportunity to put the data aside for a couple of days and then go back to it with fresh eyes. This did result in new understanding as I tried to make meaning of the data and some themes were conjoined at this stage.

5. Define and name the themes, as rich text rather than single word labels.
    a. The final themes were selected and again a sort was completed to organize all the codes into the final 12 themes. During these first five steps a thematic map was also developing that helped understanding and sorting of initial themes into final themes. The thematic map for Theme 3, is presented at Figure. 10.

6. Write the report.
    a. The final report on the analysis is the resultant 12 themes that was taken forward as the 20/20 LEADERSHIP model in 1.5.2.

Axial coding was used to link the codes into themes looking for their relationships, causes that lead to linked phenomena, codes linked by context, etc. As is usual with thematic analysis, analysis of codes began from the outset as commonalities and initial themes appeared and these analyses were added to the richness of the initial and subsequent themes. The final themes become the foundational principles for the 20/20 LEADERSHIP model. Memos were recorded that tracked the evolution from open coding to themes that for example describe how codes interact to form a new category or theme. During the journey to the final themes, the themes changed, were expanded, and some were absorbed or deleted as is the nature of Thematic analysis.

Code: These numbers refer to their origin in the original 268 line items of data.	MEMO	Initial Theme	Developing Theme	Final Theme	Principle #
104. Kindness as a central concept	Seen as a welcome relief by employees	Kindness as a core concept	Kindness	By treating individuals with kindness, these individuals become business enablers	3
220. Kindness	As a 'disruptive' behaviour	Kindness seen as different	Kindness	By treating individuals with kindness, these individuals become business enablers	3
91. People before dollars	People are the key to generate profits. Particularly important when minimum $ investment is available. Training is the first thing to be cut.	People first	Focus on people before profits	By treating individuals with kindness, these individuals become business enablers	3
157. People first		People first	Focus on people to enable business	By treating individuals with kindness, these individuals become business enablers	3
190. Keep the people at the heart of leadership.	Had this been subject to latent RTA coding, far more attention would have been given to what ‘heart of leadership’ may mean.	People first	Focus on people to enable business	By treating individuals with kindness, these individuals become business enablers	3
40. People first.		People first	Focus on people to enable business	By treating individuals with kindness, these individuals become business enablers	3
57. Follower as profit generator –	Followers are the value-added component	Value Added	Followers are the profit-generators	By treating individuals with kindness, these individuals become business enablers	3

213. People must be placed at the heart of their own and business change.	Empower people to change themselves and the business	People first	People at the heart of their own change	By treating individuals with kindness, these individuals become business enablers	3
217. People change cultures not technical models	People make the business change	Business enablers	People drive change	By treating individuals with kindness, these individuals become business enablers	3

Table 3. Thematic Coding of Principle 3

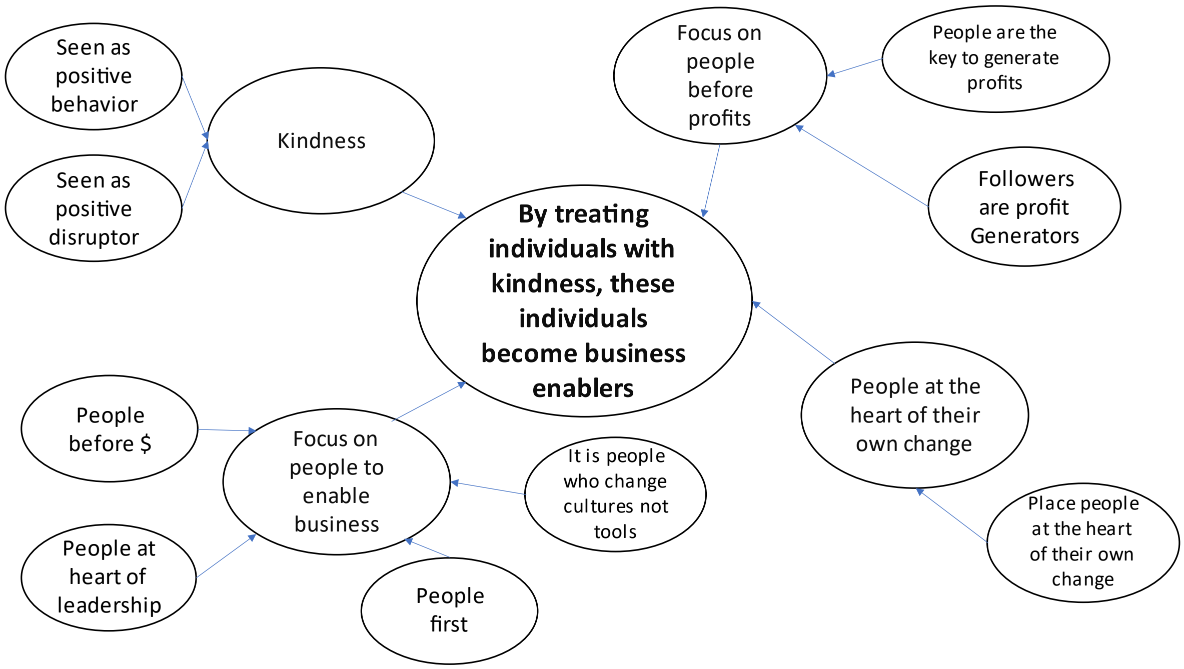


Figure 10. Thematic Map for Principle 3

1.5.2. The Initial 20/20 LEADERSHIP Model

20/20 LEADERSHIP - RTA Themes Generated by Semantic Reflexive Thematic Analysis of Part 1

The following are the 12 themes that were inductively generated using RTA that will now be referred to as the 10 principles of the 20/20 LEADERSHIP model.

1. Leaders consistently nurture teams with truth and organizational justice.

The role of leadership is to consistently nurture both the people and the business, mindful of human needs. Focusing on the role of a nurturing and influencing through modelling, mentoring, and coaching builds strong communities that develops leadership from within the community. Engaging everyone on the team in a truly egalitarian way benefits the individual and the business as a force multiplier for problem solving and creativity. This egalitarianism (Eckstien, 2018) is demonstrated from a core value of social Justice exercising truth and doing what is right as is understood by the business community. Leaders desire to make a difference by demonstrating a positive attitude in an almost quasi-pastoral way for the benefit of the business. These leaders recognize potential in others and place these individuals at the center of their own growth. These leaders are compelled to step forward to 'do the right thing,' even when it may be unpopular with others.

2. Every interaction is an opportunity for growth of the leader and the follower through relationship, mentoring and coaching.

20/20 LEADERSHIP leaders look for opportunities for interaction with their team members to build relationships. It is only through a depth of relationship that potential can be identified for growth and for the team to truly bond. This is the beginning of building leadership in others. Truly knowing one's people through looking at interaction as opportunity can lead to an almost covenantal relationship that prepares team members to take on the mantle of leadership. This business community builds a deep engagement which reveals individual and business opportunities that would not be the case if time and effort were not put into finding and maximizing the potential of such interactions. These interactions, both formal, such as in meetings, and informal, such as eating lunch together, nurture the personal touch and facilitate the building and, if needed, the repairing of relationships. This becomes more difficult as the span of control increases but making the effort to maintain the relationship through meaningful interaction benefits the individual, the team, and the business.

3. By treating individuals with kindness, these individuals become business enablers.

Kindness puts the value and needs of people before dollars. Kindness keeps people at the heart of leadership as it is people who in most businesses generate profits not tools, machines, or ideas. Continuous improvement and cultural change are enabled by people and thus putting people ahead of tools and acting with kindness as a driving principle is a touchstone to enabling those people to connect with the business. Kindness can be shown by taking the time to listen and cater for the team's needs.

4. Leadership is for the long haul.

Leadership is a journey with a strong time component. Change, particularly cultural change and preparing the next generation of leaders, takes time which the leader must embrace irrespective of the challenges of the moment. Leaders must take the long view for the people and for the business. Change must be grasped and be committed to with that long view irrespective of leadership fashions, to promote continued and future success. Leaders also mature overtime and thus one's own leadership changes over time, particularly as one understands and becomes comfortable with the interaction of influence and authority.

5. Leaders set performance and moral and ethical standards and hold themselves and their followers accountable.

Leadership in business must show measurable results, meeting and improving goals and metrics. However, those standards and goals must be both moral and ethical for the people and for the business. Authentic leaders must exemplify and model those standards as business enablers. Those moral and ethical standards should be written, published and embedded in the culture and understanding of the team, department, and organization. The moral and ethical core should drive the leader, the team and the business.

6. Leaders model and influence authenticity, fairness, honesty, and integrity.

Leadership is action orientated, and modelling authenticity, fairness, honesty, and integrity are such actions. Being true to oneself is a mark of authenticity whilst acknowledging that no leader is perfect. However, all that the leader does will be noticed, commented on, and modelled for good or bad. Fairness, honesty, and integrity can be difficult concepts to fully capture but the leader's people recognize it when they see or do not see it.

7. Leaders build collaborative then participatory teams. This leads to followership and corporate citizenship that brings sustained gains for individuals and business.

Collaboration, i.e., working together, is the basis for participatory action. Participatory action is the joint ownership in the working environment including problems to solve, or fresh ideas for opportunities for growth that the team has been empowered to act on and for which they are held accountable for making decisions that will impact the business. Key to this level of participation is the 'leaders' focus on building trust and technical competence with and amongst the team. An emancipatory work environment leads to ownership and corporate citizenship. This means that teams are trusted by line leadership and that trust is built over time and through proven successes. As teams move from collaboration to participation, the 'leader' can step back from the traditional role and eventually is able to step away and allow a culture of followership to carry on the work without continued influence. When individuals are driving change to business goals that they have set, then they are corporate citizens and key business enablers. This level of participation brings beneficial outcomes that sustain change in individuals and in the business.

8. Leaders are pragmatic, share vison and remove barriers to achieve goals

Team vision, mission, and purpose must be fully articulated for teams to move forward, whilst the leader continually looks for the next barrier to remove for the team to be successful. The team can and should be giving input to the vision, mission, and purpose as quickly as possible. Leaders must be pragmatic allowing new thinking in the team and letting team members exercise their practice. Leaders share their vison with the team to include the team's creativity as change agents in their own communities. The 'leader' must then focus on understanding and removing the barriers to the team's success. That vision, including the team's input, must be appealing to engage the team particularly in terms of sustainability so the 'leader' can move to the next project.

9 Leaders demonstrate humility and respect.

Leaders should be open and humble enough to learn from their subordinates and incorporate their subordinate's ideas into their own growth and that of the business. Respecting one's subordinates by their inclusion in team vision and decision-making nurtures the team through collaboration to true participatory action. Leaders will often not understand the technical nature of each team members job so having the humility to ask for their input will nurture the growth of the individual and the business. Having the whole team at the core of change, demonstrates humility toward and respect for the team and benefits the wider business.

10. Leaders practice self-awareness through reflective practice.

Self-awareness of personal strengths and weaknesses is a force multiplier for any leader. This self-awareness is generated though robust reflective practice and is key to both authentic leadership and participative action. Leaders must make time for this reflective practice as an essential part of their professional practice.

These themes will now be called the 20/20 LEADERSHIP principles which will be carried forward for Preliminary Testing in Company B and Formal Testing in Company C.

Important Consideration in the Application and Testing of the 20/20 LEADERSHIP Model

The 20/20 LEADERSHIP model provides a new culture of leadership and follower relations that has been presented as a list of 10 principles. It is essential to note that these principles are not operated in isolation to each other. The principles contain seven behaviors (truth, kindness, fairness, honesty, integrity, humility, and respect) that need to be consistently and continually practiced interdependently even though individually they may appear as independent principles. For this reason, it is difficult to independently test individual principles. Furthermore, time may not be available in the working day in real-time manufacturing to isolate a workstation to test a specific principle. Therefore, testing of the principles will largely be during interactions on daily Gemba, routine mentoring and coaching, PAR interactions, 6S, OBC, and other Lean manufacturing interactions.

Comparative Analysis of the 20/20 LEADERSHIP Model with other Leadership Models

Though I will make some comparisons between elements of 20/20 LEADERSHIP and other models, comparative analysis between 20/20 LEADERSHIP and other models is not a stated purpose of this research and will not be considered in detail. Though this would be a valuable contribution to the body of knowledge, reasons of thesis purpose and restrictions on word length preclude further comparative analysis. Comparisons with other faith and secular derived leadership models is recommended as an item of for future research.

1.5.3. Secularization and Operationalization of the 20/20 LEADERSHIP Model

Initially, I had a concern that the completed model would need to go through a secularization step prior to operationalization to remove religious language and connotations. However, the result of the thematic analysis produced a model that only uses secular language and contains concepts that would be readily understandable as secular, and therefore the model did not require further secularization. However, the model can still be seen to hold true to the Jewish core from which it was derived.

Operationalization of the 20/20 LEADERSHIP Model.

To become useful, the 20/20 LEADERSHIP model had to be operationalized; that is, taking the theory that I have built in this research even though it is practice based, and evolving that theory into operational practice that can impact business. Emilio (2003) says that operationalization is the process by which a researcher defines how a concept (the 20/20 LEADERSHIP model) is measured, observed, or manipulated. In traditional models, operationalization provides the bridge between theoretically based hypotheses and the methods used to examine these predictions. Operationalization enables the researcher to infer the existence of some phenomenon by means of observable and measurable effects (Lukyanenko et al., 2014). In practice this operationalization was carried out through training followed by mentoring and coaching of the 20/20 LEADERSHIP model in the work environment; its effects were then measured by qualitative and quantitative measures.

In Plant A at Company C, and then only because of a very much reduced demand for product, the company planned a few weeks in advance so that I could take their permanent staff for 3 concurrent full days of 20/20 LEADERSHIP operationalization training. In Plant B, where demand was still high, the leadership could only release the new leaders for training for 4 hours once per month, so training was carried out over the first 4 months of the research. These necessities had both advantages and disadvantages. Plant A had the advantage of having all the training up-front from where they could practice 20/20 LEADERSHIP via their individual business projects selected to normalize the 20/20 LEADERSHIP training. However, each student tended to focus on those elements that they remembered most strongly from the training as time passed. Whereas Plant B had the training in modules, with the 10 principles of 20/20 LEADERSHIP being the first module, so could concentrate on one module at a time, however, they did not get the full picture of operationalized 20/20 LEADERSHIP until completing all the modules. However, both plants had the benefit of direct application of the theory in practice as leaders via their individual student projects supplemented with monthly coaching by their mentors improved their practice and the business.

1.5.4. Chapter Conclusions.

RTA produced 10 themes which are now the initial 10 principles of 20/20 LEADERSHIP. The principles did not need to be secularized as the RTA process itself produced secularized principles. This was initially surprising but having reflected on this, the former Presidents did not use faith-based language in the focus group session, but they did lead with faith-based principles. Operationalization training was undertaken at both sites to transform the RTA theory into useful practice. One aspect that will need further consideration is how to test individually principles as part of normal daily work, when in practice some of these principles operate in parallel on the shop floor.

Part 2. Application of 20/20 LEADERSHIP in a Secular Preliminary Action Research Project

Chapter 6

2.6.1. Preliminary Project 2: Cycle 1. Reduction of Quality Defects at Company B

"Great leaders are constantly finding ways to honour their key people and celebrate their success."

Buffet (2018)

The main objectives of Chapter 6 are:

1. Carry out a second preliminary PAR project, this time in industry to test 20/20 LEADERSHIP and PAR.
2. Demonstrate that 20/20 LEADERSHIP using PAR provides measurable business improvement.
3. Detail key lessons learned as foundational learning for the major formal project that will follow.

Context and Purpose

Company B had a major quality problem that the new GM (this and other abbreviations and definitions used at Plant B can be found at Appendix 5) was convinced was due to dysfunctional teams who had suffered for some time from little to no leadership. Complaints were far too high, costing the company $635,000.00 in 2015 with the possibility of losing dissatisfied customers. As this is a real-world project, it also has two specific business objectives: to keep the current customers by protecting them from poor quality product (inspection focused) and to implement a system that will ensure poor quality product is not manufactured in the first place (assurance focused). When I discussed this work as my DBA project using the new 20/20 LEADERSHIP model with the GM, he encouraged me to go ahead on several counts. Firstly, I should drive ahead to solve the quality problem and save the company from having to lose $635,000.00. Secondly, I should devise a program to teach the model to new leaders and potential leaders, and thirdly, I should devise a community focused tzadacha project having explained the origin of 20/20 LEADERSHIP to the GM. The GM particularly liked the concept of team building in a socially responsible context. This was the opening for me to introduce 20/20 LEADERSHIP to the business and particularly exciting to train a new generation of future leaders in secularised 20/20 LEADERSHIP through what we called the Future Leaders

Club (FLC). The FLC was made up of individuals identified by me, the other department heads and the GM. These new leaders' first exposure to business leadership would be the 20/20 LEADERSHIP model. We also looked for a socially responsible project as a vehicle for 20/20 LEADERSHIP outside of the work environment and decided to work with the Food Bank of Central New York (FBCNY) (FBCNY, 2017) as the 'team building charity project' for the next 12 months, the team actually continued this project through 2019. This charity (tzadacha) and social justice (tikkun olam) project fulfilled the company requirements to give opportunities for employee team building in a more social environment, and my requirements for the application of 20/20 LEADERSHIP.

The FLC (20/20 LEADERSHIP) training that I designed was project-based and mentor-led. This training was enthusiastically welcomed at Company B by the GM, students, and the leadership team. This was in sharp contrast to line manager's attitude when I had tried to introduce the 20/20 LEADERSHIP principle at Company A. That GM was "not interested in soft skills" and on reflection I believe this was in large part why I was subsequently 'reorganized' out of the company. His predecessor in Company A was a champion of leader's soft skills and it was he who promoted me to the head of department and encouraged me when I first discussed my desire to introduce authentic style leader training in Company A. This was an early indication of the difficulties of introducing 20/20 LEADERSHIP as a middle manager.

A K-A Reflective Practice.

I learned very quickly about the problems of organizational politics when trying to introduce change from the middle of an organization without the support of senior leadership. This lesson was reinforced four years later when at the end of this course of study, Company C was purchased and at a stroke, my department were all made redundant. Organizational change from the middle needs support from senior leadership to be sustained. Without such support it would be a fool's errand to attempt sustained organizational change.

The Company B senior leadership team was incredibly positive about the 20/20 LEADERSHIP model, the FLC, and the opportunities for growth in the FBCNY project. Each volunteered to be a mentor of at least one student on the FLC program. This level of enthusiastic engagement harks back to the Shani and Passmore model of successful AR through building quality relationships and their impact on preparing organizations for change.

The GM explained what we were doing with FBCNY and why, to all plant employees at a monthly business meeting. This brought the entire plant into the first steps of readiness for change using 20/20 LEADERSHIP and being AR collaborators.

Readiness for Change.

Another important learning point from my forty plus years of practitioner experience is the importance of readiness for change (Weiner, 2020; Lehman et al., 2002; Armenakis at al., 1993).   Readiness for change is distinguished from resistance to change. Readiness is described in terms of the organizational members' beliefs, attitudes, and intentions toward change.

The RAF is driven by new technology to ensure the UK is at least one-step ahead of the enemy in terms of speed, destructive power, data manipulation, cyber-attack, etc. Change in military life is a constant. In a presentation I attended at the British Embassy in Washington DC, the Chief of the Air Staff, Air Chief Marshall Sir Jock Stirrup, was asked, “When will all this change stop?” Sir Jock countered by saying, “Change will be a constant on my watch; we have to change to stay relevant,” Stirrup, (2005). Change in industrial life will also be challenged, but thus can be mitigated when leadership explain the change and then lead ethically for individual and business development building invested teams who will see the need and then drive change for themselves.

In the synagogue, there is not so much a resistance to change as there is a focus on appealing to Jews of today to stay relevant whilst maintaining core tradition – this has an inherent tension. In industry, change is a driver to stay ahead of the competition, though individuals still gravitate toward stability.   However, beginning a change before a business is ready will not be as successful as when the ground for change has been prepared such as in the Bob Project (Appendix 4).

A K-A Reflective Practice.

Nov 2018: Leaders must remove barriers that invalidate growth and wholeness such as the lack of ethical leadership and moral authenticity that is plaguing the US. To lead as a Jew means in a very new way for me to stand up for something different and in some eyes subversive and dangerous. This did influence how transparent I chose to become as I taught and led using 20/20 LEADERSHIP.

Jan 2019: Does an individual who leads from a religious motivation need to vocalize those beliefs or rather just demonstrate them in the way that they lead? Walk the walk, not talk the talk. This is the object of trying to produce a secular model of 20/20 LEADERSHIP.

After an initial orientation, many hourly employees began regularly helping at the food bank on a Saturday morning whether on shift or not, and we very quickly began to see the impact at work in increased conversations between 'new' friends particularly between departments and between hourly and leadership staff. Importantly, this engagement with the FBCNY project and the start of the FLC occurred a few months before the first cycle of this second AR project and laid the groundwork for what follows. In social research, it is often difficult to isolate cause and effect of an individual change as the driver for a success (Bell and Newby, 1978). In this case, a driver outside of 20/20 LEADERSHIP was the total buy-in of the GM and senior leadership team. Its impact on the project certainly had a positive correlation and added to the project success.

Business Need

Repeat quality defects had cost the company $635K in 2015 in credits paid back to the customers. Customers were showing their dissatisfaction by second sourcing and threatening to take their business to another manufacturer. The GM asked me to move from reliability manager to quality manager and tasked me with reducing customer complaints over the next twelve months by at least 20%. This was a great opportunity for implementing 20/20 LEADERSHIP using a PAR approach.

Meeting with my new team was the first opportunity to use 20/20 LEADERSHIP in an industrial setting. Using PAR, the team would provide collaborative and then participative input to produce a complaint reduction plan and then be collaborators in the subsequent action. I would facilitate them through the operationalized 20/20 LEADERSHIP model with mentoring and coaching, but whenever possible, I wanted the model itself to be the enabler and 'leader' of the team. Although I could revert to my aircraft accident investigation experience to lead the technical aspects of defect investigation and quality improvement, I had to resist this and allow the process to be developed by and sustained by the team. They understood my intent and importantly they had experience of the historic plant quality culture that I did not have and so were better placed to be the change agents and ideal as my project collaborators. I made it clear to the team members that they had competence to solve this problem and that between them they held the solution in line with my commitment to person-centred-learning (Rogers, 1967). The team identified immediately that we had no operable Quality Management System (QMS) and that the quality team did not investigate customer defects. The Production Manager who did investigate defects though with little process or consistency, had a somewhat adversarial attitude toward the quality team. The business had been producing the same level of defects for some years and not lost any major accounts; his attitude was why change? The Production Manager 'blamed' the quality department for the defects and saw it as 'their' responsibility to 'fix it' but did not involve them as solution finders or problem rectifiers. His focus was on the need for his own people to be quality inspectors and not to develop a proactive (QMS).

Plan

Building a QMS would be my responsibility with the team's input over an extended period. Building a Root Cause Problem Solving (RCPS) process would be a quick win and was an ideal enabling objective for the newly engaged team that could also inform a proactive quality system. The plan would be for the team to design this process and lead the data collection. Though not an ISO 9000 company[11], the customer expected for their voice to be heard and Voice of the Customer (VOC) is key to collaborative quality improvement. The process must ensure that not only is the customer heard but they require and deserve prompt feedback to their complaints. The minimum would be for the customer to receive an initial response to a complaint in two working days and a root cause and problem-solving solution to be put into place in seven working days. Engagement with the process would be guided by the developing 20/20 LEADERSHIP model. This phase took four months.

[11] Industry wide quality assurance standard which since its 2008 iteration has had a specific focus on the 'voice of the customer'.

Taking Action

The Quality Supervisor (QS) volunteered to take the lead to develop the new RCPS process, (Figure 11) and design the documentation; this level of voluntary ownership was immediately gratifying. I would act as an enabler to remove barriers outside the QS's span of control. The completed process documentation would be audited by me before being handed for final approval to the GM. As the Quality Manager, I would inform the customer of initial findings within two working days of receiving the complaint and would provide RCPS findings within seven working days.

In the first week of the new process, the team received 12 customer complaints. The process worked well but the operators saw the RCPS as a large quantity of extra work, (Principle 11) which it was. The team did reveal some root cause, though were not yet all trained in the RCPS tool and none were very experienced in its use. However inter-department communication was immediately improved, and the production department told the QS about several other needs that they had that were barriers to producing a consistent quality product. This process however was very slow, business need drove us to begin too quickly and although we proceeded for 3 weeks or more to shake out bugs, the team did not achieve the seven-day return to the customer. However, the team noted that the operations staff seemed to be happy with the process as they now had someone who wanted to listen and help them as a part of the investigation. This was feedback from the application of organizational justice (Principle 1) which is core to 20/20 LEADERSHIP. My team and the production team were soon mirroring (Chartrand and Bargh, 1999) my behaviours (which was my intention) and 20/20 LEADERSHIP was beginning to change speech, relationships, and culture. The number of internal RCPS recorded for investigation increased by 400%, as a function of capturing and investigating all complaints. The QS could not keep up with processing this increase and was swamped with the extra work, though the team agreed that this new data would drive change if they could manage the numbers. This phase took over 6 months.

Organizational Justice

According to Daniel Wester, (Cropanzano, et al., 2007), organizational justice has the potential to create powerful benefits for organizations and employees alike that include greater trust and commitment, improved job performance, more helpful citizenship behaviours, improved customer satisfaction and diminished conflict. Cropanzano, et al. (2007) states that members of teams that practice organizational justice sense when they are being treated fairly and respectfully. Cropanzano, et al., (2007) also say that justice defines the essence of the individual's relationship to their employer's distributive, procedural and interactional core dimensions. While organizational justice borrows from these older traditions, it has its own distinctions. Organizational justice is core to business development. However, I was unable to find organizational justice aligned with tikkun olam described in academic or other literature which is a current research gap. Both tikkun olam and organizational justice are people-focused and should be related to business. Tikkun olam motivates Jews to repair the world to hasten the arrival of the Messiah, whereas organizational justice is motivated by a compulsion to do the right thing within organizations.

As defined by Cropanzano et al., (2007), organizational justice is a personal evaluation related to the ethical and moral standing of managerial conduct. As tikkun olam is a mitzvah, the individual operating in an 20/20 LEADERSHIP environment needs to be centred in a place of higher standing than purely managerial conduct. Justice must matter to the leader as much as to the employee, (Cropanzano et al., 2001). Folger (2001) suggests that it is important to acknowledge that employees prefer justice because it allows them to predict and control outcomes that they are likely to experience from organizations. This compassion and fairness in actions and relationships extends to other psychological elements of work such as happiness and belonging, as is detailed in Maslow's hierarchy of needs. This helps with being able to form a model of leadership as the morally appropriate way others should be treated, (Folger, 2001).

There is more to organizational justice that just equity in dealing with employees. Cropanzano et al., (2007) also posit that we can apply three allocation rules to organizational justice:

1. To each the same.
2. To each in accordance with contributions.
3. To each in accordance with the most urgency.

Employees who are justly treated are more likely to comply with work-based policies, show extra conscientiousness and behave altruistically toward others, (Cohen-Charash and Spector, 2001). Indeed, workers tend to tailor citizenship behaviours carefully, doling them out to those who treated them justly and withholding them from those who do not. This justice can be a core value that defines an organization's identity. Organizational justice can also be the core of particularly difficult points in industrial life such as hiring, arbitration, disciplining and firing; if you cannot give people the outcome they want, at a minimum one can provide is leadership over a fair process. Tikkun olam goes further than this, demonstrated by a leader who will lead uncompromisingly with a view to social and organizational justice, repairing, nurturing, and building.

Cohen-Charash and Spector (2001) make the point that organizational justice helps managers to make difficult decisions more smoothly. This allows employees to have confidence that they are being dealt with fairly and that power will be used in accordance with principles that respect the dignity of all involved, (Cohen-Charash and Spector, 2001). In my view this is sound and tikkun olam aligned business advice so aligned with a leadership paradigm such as 20/20 LEADERSHIP which gives the leader a set of signposts or principles to help them be mindful of the right thing to do. This will consistently develop the team and therefore grow the business. Thus, the consistent and committed practice of organizational justice will lead to organizational development.

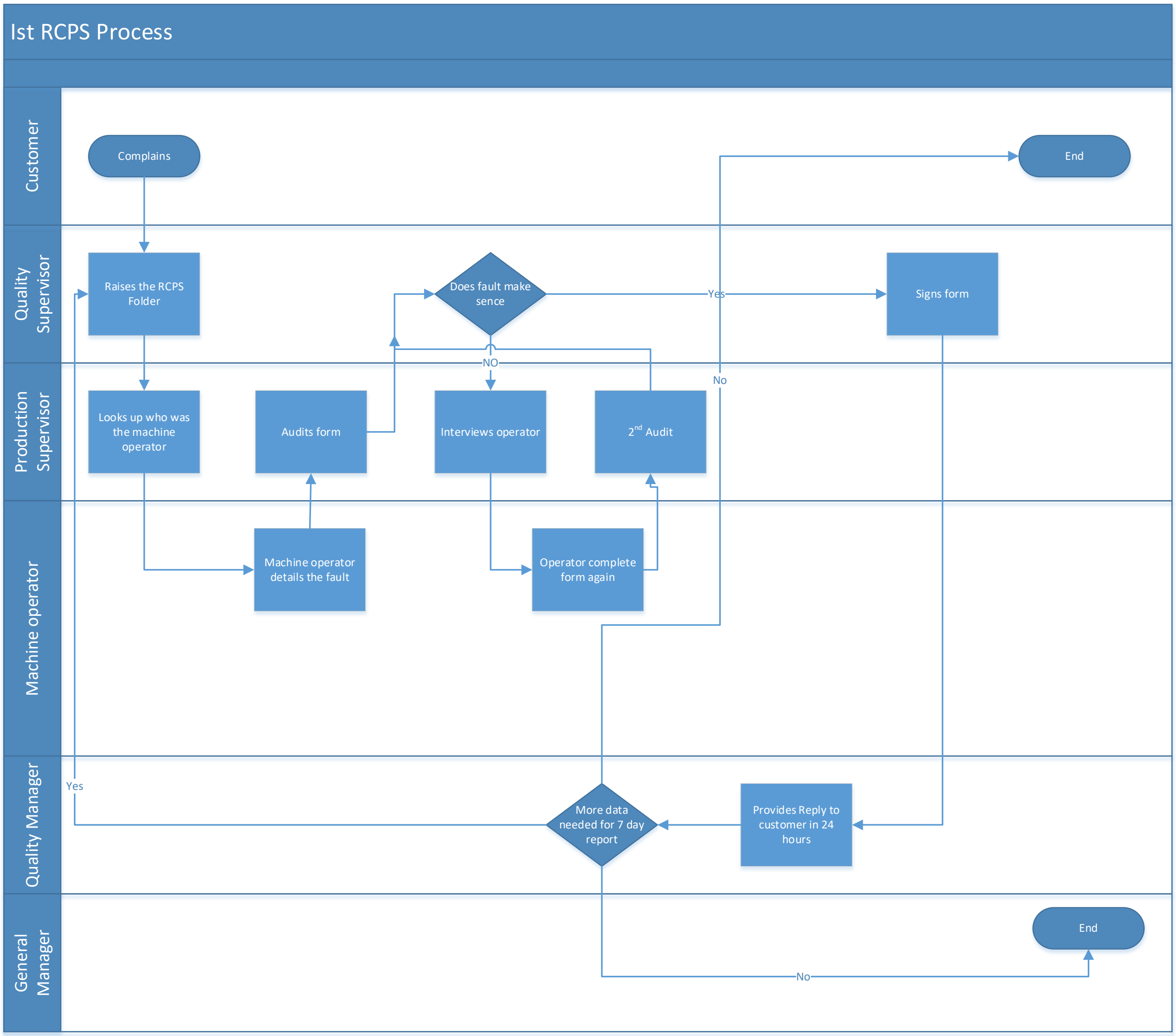


Figure 11. The First RCPS Process

Evaluation

This first plan was successful in terms of eliciting a root cause but unsuccessful in terms of achieving process time to the customer, for several reasons:

1. *Too many steps*. The first process contained bottle necks that were barriers to meet the 24 hour and 7-day turnaround required as a measure of success.

2. *Not enough empowerment; thus, too much oversight.* We had given individuals responsibility but not the authority to enact the changes required. They needed to keep coming back to me and other leaders to be successful. Ownership had to be driven down as far as possible.

3. *Insufficient trust or empowerment*. Not empowering the staff to do the job demonstrated a lack of trust. We could not expect them to take on extra responsibility whilst demonstrating that they were not trusted to complete the task. This was not 20/20 LEADERSHIP, but it was typical of the status quo, which needed to be changed.

4. Insufficient E2E training of the wider quality process and specifically the technicality of RCPS. The pressure to reduce customer complaints caused us to attempt to implement change prior to completing those steps needed to prepare for the readiness for change. This was unsatisfactory but was a real-world constraint. However, we could not just accept this and had to find a better way forward.

5. *Issues with span of control*. We had too many subordinates feeding into one leader. At this stage we did not have the budget or opportunity to add more staff.

6. Not impacting production of poor quality. We knew the causes of non-compliance, but they were not yet impacting the production of non-compliant product.

Though the amount of non-compliant product passed to the customer began to be reduced, it was still being produced. Operators stated that they were too busy 'wrestling' with the machines and setting up short run orders in response to last minute scheduling to watch over non-complaint product getting into the pallet for dispatch. A complaint could be the result of as little as one defective carton in a pallet of several thousand and be completely spurious due to a fleck of dust during printing. It is important here to understand that up to 14,000 cartons per hour could be produced on one gluer machine and that such numbers at such speeds could not have piece part inspection. This inspection was required at printing.

The team recognised that they needed better engagement and better solutions. This meant that the machine operators needed to become leaders of their teams and take ownership of quality themselves, i.e., they and to be enabled to not produce poor quality product in the first place. Culturally this was very new to the production teams as historically customers either did not complain or were content with being refunded for poor quality. The customers attitude had changed, and they no longer accepted poor quality as their machine down-time caused by defective Company B product also cost them money and impacted their customers. The team recognized that they needed systemic change. At a monthly meeting of operations and quality staff chaired by the QS, but prompted by this research, they worked together across departments to remove barriers, treat each other with respect and devise improvements. They identified the following improvements.

1. The machines needed better cleaning and maintenance to drive out variability.
2. The quality department needed clear standards against which to measure all products to find variability.
3. Machine vision technology needed to be better understood at printing to remove defects earlier from the manufacturing process.
4. The RCPS were taking far too long and the QS was being swamped by the extra work. The system needed to be better trained and streamlined.

Importantly, I did not attend these meetings, as it was the team that needed to devise and own their own solutions to ensure buy-in and sustainability. They were beginning to not only set their own vision but were also accepting the responsibility to remove their own barriers.

A K-A Reflective Practice.

That the team were so quickly becoming self-motivated to improve the process was exceptionally gratifying and a first step in decreasing complaints and increasing RCPS turn-around time. The model as a leadership principle was beginning to drive change.

The need for better maintenance, particularly as a prelude to centre-lining the machines to reduce set-up time, was communicated to the engineering and maintenance department. Quality standards were designed based on the customer requirements and were put into place by the quality team for all products. The production team accepted that the new standards were necessary. The largest problem for the quality team was that the QS was swamped with the number of RCPS and her other duties were suffering as a result.

We had two priorities: firstly, to reduce defects getting to the customer, and secondly to meet our own time standard for answering complaints to 24 hours and 7 working days. The team suggested that instead of the QS managing each RCPS, that the RCPS was registered from the customer by the QS and then the actual RCPS was passed to the Production Supervisor (PS) for action. This would have a number of advantages that would include each shift being responsible for fixing its own problems and that the workload would be separated between the four shifts. However, even though it would spread the workload, it still required the PS of each shift to do extra work particularly while the root causes of the problems were not yet understood. The QS now needed to know how to get all shift PS to take on this extra responsibility. Using the model, we had to lead with justice, consistently doing the 'right thing'. We needed results but we needed the PS to own the problems and work with the quality team in an engaged and fair way.

Key learnings.

The failure to achieve an expected outcome should be considered an opportunity for new understanding in action research. 20/20 LEADERSHIP encourages learning and the change of focus from punitive measures to understanding 'why' and nurturing growth was very well received by operations personnel. Sustained change in business often manifests as small iterative steps rather than externally introduced 'big bang' leader-isolated change. Indeed, when 'big bang' problem solutions are given by external actors, there is a very poor record of sustaining the change. When the engaged and enabled team are permitted to explore their own change, solutions will be found for which at the outset of the research, questions had not even been considered. These discovered solutions are owned by the team and thus the solutions are sustained. However, the researcher still needs to keep the team focused on the vision, as side discoveries though interesting can derail the process. AR gives the green light to creativity, but one needs to guard against randomness derailing achievement of the objective. The team generated its own energy through success as leaders and teams learned to remove barriers.

2.6.2. Preliminary Project 2: Cycle 2. Reduction of Quality Defects at Company B

Business Need

As a result of the previous cycle, the project team suggested we set up two recurring meetings. Firstly, the Quality Steering Group (QSG) was made up of department heads which would be the strategic group chaired by the GM. The second was to be called the Quality Working Group (QWG) which would be chaired by the QS and would manage the medium and short-term issues particularly focused on the tactical issues reducing defects and expediting the RCPS. The QS was now becoming more used to how I operated using the 20/20 LEADERSHIP model and began to practice and exhibit 20/20 LEADERSHIP behaviour, including in the first meeting on the QWG. It was important that neither I nor any other managers attended the QWG as this was the supervisor level ownership and empowerment meeting. After the first meeting of the QWG, changes were requested to the RCPS form and process including that the PS should be given the RCPS paperwork for them to manage the process rather than the QS. This was a win for the QS and a win for PAR and the 20/20 LEADERSHIP model as they came to this conclusion themselves. The quality team also asked for greater input to production and suggested the team put Transition Point Auditing (TPA) into place with each production line having a focused audit on the product production parameters several times per shift. A transition point is any point in the production process where one output is the input step of the next process. Typically, it is at these steps between processes where defects can be captured most easily before more value is added to the product. TPA and quality control is useful, but only as a stepping-stone in the evolution to quality assurance where the machine operator is responsible to manufacture product right first time without the need for external audit and TPA. Importantly, to maximize the impact of the TPA, several elements had to be completed at once:

- Transition Point Auditor must know the process.
- TPA standards must be agreed.
- The auditor should build a relationship with and work closely with the machine operator.
- The transition point auditor needs the training to be able to coach and mentor for improvement and not just focus on inspection.

The team also put a first article inspection[12] into place as a result of discussion at the QWG to ensure the machine set-up was correct before going into production. The Quality Lab would take the first article to measure against the quality standard as a Layered Process Audit of the same check that was completed by the machine operator. This ensured that the production run did not start until first piece inspection had determined that the product complied to the specification. RCPS was also now facilitated by the PS. Defects had not been eliminated but a continually increasing percentage were being found and stopped from getting to the customer. These RCPS were programmed as part of the teams Leader Standard Work (LSW).

Plan

From the first RCPS process, focused on the PS, the team needed to find more opportunities to reduce turn-around time. We also needed to train all the machine operators on the first article and RCPS process. On speeding up the process there were two main barriers. Firstly, the operator was not prioritizing the RCPS above routine work and secondly the RCPS document was still lying in the PS's in-tray for far too long.

The operators still saw the RCPS as an extra responsibility and not an essential function. However, the PS was constantly giving them new extra 'priorities' and leaving the operator to try and prioritise lists of tasks that were all essential to improvement. For the operator to be successful, the PS must operate with organizational justice and set realistic expectations. We as leaders also had to establish RCPS as a universal priority. Finally, time should be set aside to teach the operators and teams in effective RCPS to reduce time by providing structure and focus whilst ensuring that for every new activity that was required, we removed or reduced another.

Taking Action

The RCPS process was redesigned by the QWG, Figure 12, stream-lining the process by removing extra steps and particularly extra control and layers of supervision. This placed the responsibility for change with those best able to perform the change, i.e., the production staff. RCPS turnaround was still too slow due to the shift pattern of four days on and three days off. Because of this, the PS could be out of the office for the entire planned investigation time.

[12] Transition Point Audit is a process whereby the first article (product) off the production run is comprehensively measured against the customer requirement. Only once the first article is assessed as fully compliant does the operator obtain permission to proceed to full production.

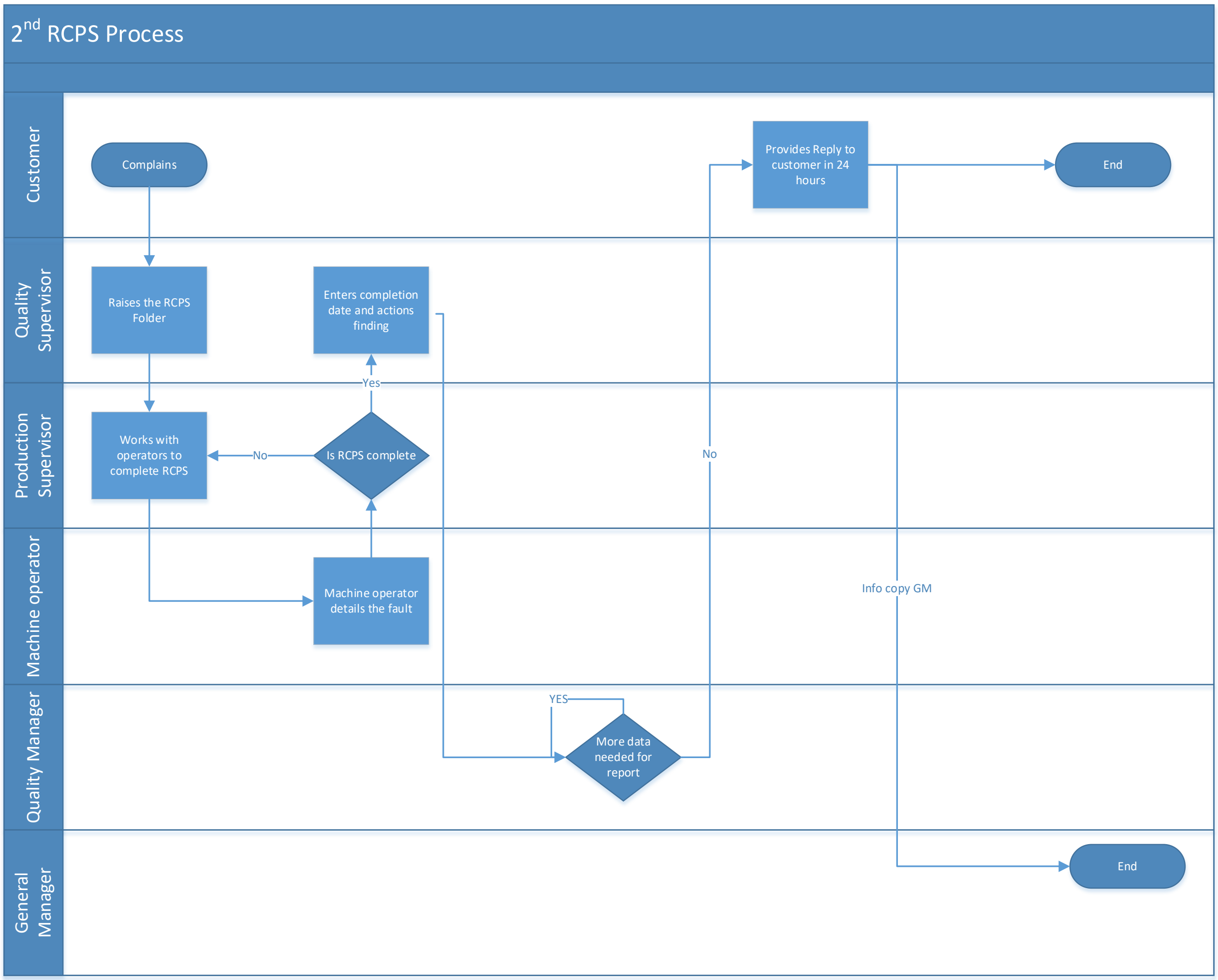


Figure 12. The Second RCPS Process

All production supervisors received one-to-one training on the RCPS process and the principles behind 20/20 LEADERSHIP, building relationships, setting vison, removing barriers, and creating corporate citizens through humility and respect as well as technical competence. Customer complaints began to decrease but initially the internal non-compliance increased dramatically as both the Transition Point Auditors and the operations staff located and quarantined defective or suspected defective product. This placed a huge burden on operations to hand sort defective product, but as they were the originators of the defects, it was correct for them to take ownership of the defective product. We also found that as we were able to sort defective product to remove a known defect, this was cheaper in labour than having the customer scrap defective product and us having to remanufacture. The teams were now removing their own barriers to success. External RCPS continued to reduce and soon internal RCPS began to reduce due to increased awareness.

Evaluation

The teams were becoming much more engaged with the product they were producing. For any instance where non-compliant product was found by the TPA or production personnel a 100% product sort was initiated. This entailed each printed and glued carton to be compared against the customer requirement. Non-compliant product was waste and scrapped. With the introduction of TPA, RCPS and team engagement, the tons of non-compliant product began to plateau and then reduce to much lower levels. This was protecting the customer from defects and protecting the business from loss of the customer but was not sustainable as waste still costs the business dollars. Adding to the PS and operator delays, I was also a bottle neck as I had to audit every RCPS. We needed a third iteration of the process that stopped both the PS and me becoming barriers to success. In 20/20 LEADERSHIP, leaders remove barriers (20/20 LEADERSHIP Principle 8), they do not become the barriers. Areas for more effort included:

a. With only one person to carry out TPA per shift, we could not capture all defective product. Each operator had to own quality assurance so we could move away from quality control.

b. Some operators were not owning up to non-compliant product, which was getting to the customer. All needed to demonstrate honesty and integrity (20/20 LEADERSHIP Principle 6).

c. We were hand-sorting all known defective runs before sending to the customer, which was resulting in a decrease in reported defects, however this extra process increased labour costs.

d. We needed even more engagement with those that were taking longer to accept the new culture. This meant the team had to focus on the ‘why’ and relationship building.

e. We had to build even greater trust in the organization, so all operators felt reporting defects was the right thing to do.

f. Better engineering controls could be put in at cost, but greater care, awareness and honesty of the operations staff could achieve the same end of only first quality getting to the customer.

g. We did not have staff for 100% final inspection, so engagement had to be the force multiplier to move from control to assurance as quickly as possible.

h. Introduction of TPA caught a lot of non-complaint product but not all.

i. Machines started to be centre-lined with precision and repeatability which decreased non-compliant product. Lab samples were colour matched and technology level for defect analysis increased.

A K-A Reflective Practice.

The team and the process were becoming victim of their own success in that process problems and ideas for improvement were becoming known at a speed that was difficult to react to and manage. There were two elements to this. Firstly, that the rate of change was very difficult for the team and the business to absorb, and secondly, that the needs of the business to make the changes, reduce defects and keep the customers were a major driving force as loss of business would lead to loss of jobs. Moving so fast made me aware not only of balancing the need to keep the business moving forward with the need for the employee to adapt to the change, but also the changes were happening so quickly it was making it very difficult to record the details needed for this project. I was also mindful that I too had a timeline to complete this project as a move from New York to Atlanta was on the horizon. These were real-world problems which are consistent with work-based-learning, however the experience added to the data set.

Key learnings from Project 2, AR Cycle 2

As engagement grows and builds in a positive and nurturing 20/20 LEADERSHIP environment, it creates its own energy if change does not outpace the ability of the team to absorb the change. Decision-making can be delegated to the lowest levels of the organization when a respectful 20/20 LEADERSHIP workforce engage with their own problems in social communities. Balanced processing became key to success, listening and enabling were far more important that talking and directing. Even within a PAR 20/20 LEADERSHIP culture, leadership cannot be a bottleneck. Leading change from the middle of an organization is completely possible but the leader needs to commit to their own authenticity and understand the extra effort (Principle 11) that will be required to lead over the long term.

2.6.3. Preliminary Project 2: Cycle 3. Reduction of Quality Defects at Company B

Business Need

The QWG met again to look at a further iteration of this evolving process. They needed to build on the success of the previous cycles and focus on further improvement.

Planning Action

The team met to build a plan to identify and act on where process time could be reduced and build on the progress that had already been made. At the QWG the PS, team and QS team felt that they could pass responsibility further down the chain of command making each lead operator responsible for their own production quality and by extension any RCPS defect investigation. The timing for this was working well as more individuals were buying-in to the change method and becoming corporate citizens. This would also pass responsibility from the hands of one PS per shift to the 14 machine lead operators expanding the pool of investigators and reducing 'bottle-necks'.

Taking Action

This task then went back to the QWG. Their outcome was for the RCPS to move directly from registration with the QS via the PS to the operator and the operator would take responsibility for the RCPS. They also decided that the team that made defective product would also sort out that product. This was a major change, accepting ownership and organizationally the 'right thing' to do, however it had a cost as they either had to shut down the machine to sort or had to work 'over-time'. The QS began passing out the RCPS folders at the tactical meeting every morning. Each folder was passed to the machine lead. I also employed a second TPA to get better shift coverage. The totality of changes made over the three AR cycles now reduced the turnaround of customer complaints so that the 24-hour turnaround was being achieved and 70% of the complaints were now being fully actioned within 7 working days. Total changes in the process now included:

a. RCPS now carried out by the machine operator who manufactured that product.
b. Machine operator become owners of first quality inspection.
c. First article inspection carried out on all products.
d. 100% sorting carried out by the team that manufactured the deficient product.

e. Two transition point auditors were now employed, but as time limited posts.
f. Each product has a colour standard attached to the work order.
g. Each product has a comprehensive laboratory standard.

Evaluation

We consistently went back to the 20/20 LEADERSHIP model to coach, mentor and generate engaged leaders. Leaders removed barriers (AR principle 8) and treated operators fairly and honestly (AR principle 6). This led to operators taking greater ownership and by setting standards, (Principle 5) leaders achieved goals (Principle 10) and using each interaction as an opportunity for growth talked about problems, teams took on greater responsibility and improved quality (Principle 2). The leaders found that when the people were engaged, they also came up with new ideas for innovative process change which accelerated change (Principle 3).

The customer was protected, and both external and internal complaints began to reduce Figure 13. Defects still occurred in this highly manual process, but the majority were being found quickly and internally. What had been a highly unstable process was coming into control. These PAR team changes reduced the customer complaints over the year by 60% (Principle 10) and reduced the rebates to customers for deficient product from $635K in 2015 to $235K in 2016 which gave reduced targets to drive continual growth, Figure 14.

Of major importance was that the TPAs and machine operators were quickly finding defects and making the machine changes to produce good product. They were owning the process and daily coming up with their own refinements. At the completion of the year we found from the data that through the QA team, the TPAs and the operations teams, we were far more effective in finding quality defects and putting more robust processes and sustained processes in place. The work was not yet finished as we still had over $200K worth of customer complaints in 2016; however, this was now below the business target. However, the major impact was the maximisation of the potential of the quality team and the operations teams having used the developing 20/20 LEADERSHIP model to improve business (Principle 9) as leaders had demonstrated that the people were the most valuable resource (Principle 7). Had time allowed, a further AR cycle would have improved RCPS turnaround time and further reduced the amount of non-compliant product being manufactured.

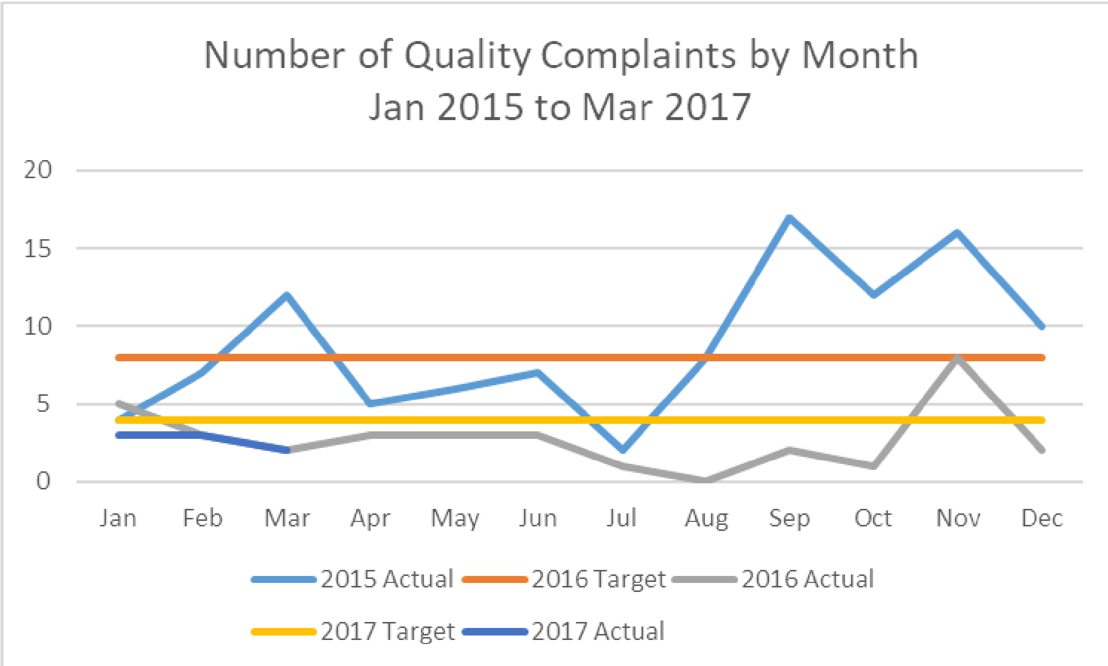


Figure 13. Number of Quality Complaints Jan 2015 to Mar 2017

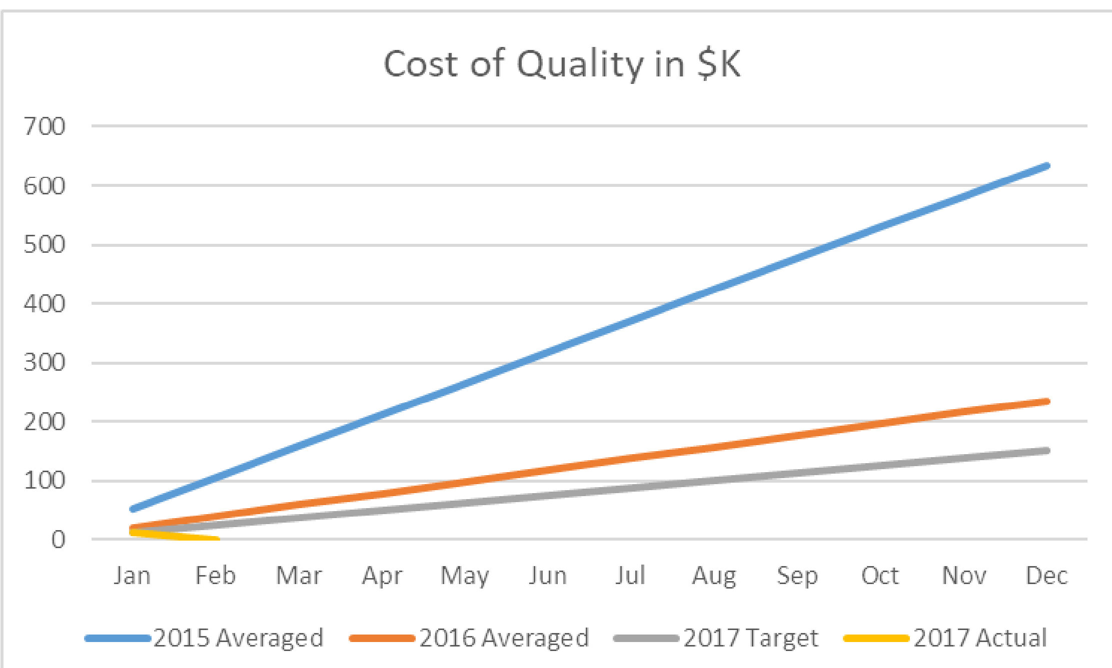


Figure 14. Budget for Customer Rebate Dollars 2015 through 2017

Reflection

This was a substantial change for the company in getting better root cause and reducing the amount of non-compliant product getting to the customer, but there was still more we could do technically and culturally. I would have liked to have stopped having to use transition point auditors altogether, giving the total responsibility for the quality of the manufactured product to the operations teams but the team was not ready at the time I moved on to company C. Defects were being found by operations which was good, but we had not gotten every operations team member on-side as defects were still getting produced and getting to the customer. I think that this was largely because though we were changing rapidly, we had not been living the process long enough to get everyone on board. The rate of change was stressful on the team, but we were keeping the customer and thus jobs. Had we also been losing jobs the stress level would have been much worse.

Though we had been successful in getting the majority such as Kay (Appendix 18) on board with practicing 20/20 LEADERSHIP, that was not universally the case. Kay was open to change and became a valuable member of the team as discussed in Detail in. However, Gwen (Appendix 18) is an example of the opposite and she was unique in this change in that she was not open to change. Gwen was of the opinion from the beginning of the change project that she was not going to change how she led and could not see the negative impact she was having on the business. She was not doing her job properly and the people she worked with and supervised refused to work with her. Even with extra effort (Principle 11) some individuals may not align to 20/20 LEADERSHIP and they like Gwen may not survive the change. The model is to enable business improvement and not to be considered a soft option.

I met with many employees one-on-one or in small groups to build relationships and build bridges, setting very clear expectations and holding individuals accountable. However, I also spent many hours coaching and mentoring, particularly ensuring that individuals understood **why** we were doing what we were doing and **why** we were adopting the 20/20 LEADERSHIP methodology. Communicating the '**why**', both to my team and the extended team, seemed to put more individuals at ease and I was able to help them see the value of change through relationship. Crucially, each of these one-on-ones and small group meetings always included time for me to work with individuals on their own vision and journey as befits the 20/20 LEADERSHIP model. This consistent caring (Principle 3) made a huge difference and is the origin of what I later discuss as the pastoral aspect of the 20/20 LEADERSHIP model (see section 4.13.1). I used coaching and mentoring to understand what each of my team needed and the result was far greater buy-in than in the group meetings. Relationship, time, real caring and getting individuals to a place where they knew I was enabling them to build their skill sets, achieve goals and be the best version of themselves that they could, was a driver for sustained change.

A K-A Reflective Practice.

Focus on 20/20 LEADERSHIP as the vehicle for change needs to be a consistent message from everyone in authority in an organization but as a minimum must be a unified factor for a team such as my quality team. Leaders have to make time to build trust, meet the point of need of their people and grow the employee through relationship not just compliance. In compliance, the employee does what the process says, but when the process is deficient, and the employee is not engaged then who can be surprised that the product is deficient? My team including my TPAs were incredibly engaged and always willing to work with operations. However, they would avoid some individuals in operations because they would always start an argument or make excuses. With these team members, I needed to spend time teaching them how to approach people to manage conflict but from the perspective of understanding that we do not know what is going on in their life or what is driving their deviant behaviour.

When we built relationships and showed that we just wanted them to be the best person that they could be and showed them that we wanted to help them, then and only then did the worst cynics soften and see that their personal success was intrinsically linked with the company's success. We began every interaction by first respecting the individual and their personal space. That would mean that the TPAs in particular would give the operator space if they were busy, in a bad mood or just not in a space for a conversation about growth and process operation. Approaching the person with 20/20 LEADERSHIP in mind as an authentic leader positively impacted the people and the bottom line.

This process took around 18 months and was driven by me from the middle of the organization. Further work should be carried out to understand how long it would take for an entire organization to be affected if 20/20 LEADERSHIP is driven from the top down. Importantly, I had senior management support and when I moved to Company C enough of 20/20 LEADERSHIP had become the culture for the work to continue from the top and bottom of the organization without me.

Cameron and colleagues write that most critical behaviours are notable by their absence in modern organizations (Cameron, et al., 2003). Learning through experimentation, such as implementing 20/20 LEADERSHIP using preliminary projects and PAR, is a trial-and-error process in which each trial generates new critical insights into the problem (Clark and Fujimoto, 2003).

Literature also demonstrates that cultural fit is a necessary part of business success and just as important as high competence. Keeping an employee around who does not contribute positively can really hurt a company (Rehn, 2014). Hiring for cultural fit is a commonplace practice but sometimes firing for poor fit is also necessary, (Mochari, 2013; Jacobsen, 2017). In summary, to operate in a culture of 20/20 LEADERSHIP, businesses need to hire the right people who are open to adapt with the business and invest in enabling them to become corporate citizens. If after focused effort to make individuals successful, the individual does not adapt to that which is needed by the business then the business must quickly do the right thing and either move them to another department to promote success or remove them from the company. Moving an individual to another department just to pass on a problem is neither right for the business or the individual. This opinion may be considered counter to a model based on justice for people; however, this research is also about building excellence in business and is therefore congruent with the purpose of this research.

Evaluation.

My department immediately wanted to get involved in the organizational change; they took the lead and became advocates for the project, talking about the concepts with others. My team were almost all 'early' adopters. Again, I believed this was due to the quality of our relationships and that my team had seen how I lead openly and with respect and trust; they understood me and my motivation. We were becoming a highly performing team through use of 20/20 LEADERSHIP, building trusting relationships focused on making each other the best versions of ourselves that we could be and developing a team culture that was bigger than just doing the job. We shared an honesty that others in the business saw and of which some were envious and asked if we had vacancies so they could join our team. Awareness of social justice and building teams outside of work at FBCNY was changing people, their relationships and how they worked together.

As a consequence of my modelling of 20/20 LEADERSHIP and the team practicing 20/20 LEADERSHIP, the team were becoming 20/20 LEADERSHIP practitioners and participants in their own growth. The dramatic change in members of my team was so stark that after a year, they were taking on greater responsibility across the business at a higher rate than other team's members. This was also seen in the FLC members from across the plant who were now my extended class of 20/20 LEADERSHIP leaders in training thus developing followership. At the annual business review, it was these individuals and not senior managers who briefed the 'C' suite.

Key learnings Project 2: Cycle 3.

20/20 LEADERSHIP delivers results and team energy spreads to other teams without input from the researcher. Teams want to improve their own social communities, and do so when trusted, respected and when leaders remove the barriers. Teams who see leaders who model transparency and authenticity, demonstrate that same transparency and authenticity over time.   Mentorship using 20/20 LEADERSHIP produces agile leaders who change business. Though the 20/20 LEADERSHIP leader wants every team member to grow, not all individuals on an AR team may be converts; in that case, the 20/20 LEADERSHIP leader must do the right thing for the individual and the business.

2.6.4. Chapter Conclusions.

This preliminary project showed that PAR and 20/20 LEADERSHIP could provide substantial business improvement and lead to changes to the organizational culture as well as driving operational excellence. This project also showed that when changing an organization from the middle, line management support was a force multiplier for success and longevity after the researcher has moved to new responsibilities. An important lesson that has been reinforced is that this is a business change model and, even with extra effort trying to nurture individuals through the change, some individuals who do not want to change may not survive the process. However, others who may not have had a bright future with the company can be nurtured to become highly engaged and motivated corporate citizens.

With the efficacy of the model now demonstrated in two preliminary projects in Company B, Part 3 will take the model into formal testing in Company C.

Part 3: Formal Testing of the 20/20 LEADERSHIP Model in Company C

Chapter 7

The main objectives of Chapter 7 are:

1. Summarize the key learnings from the preliminary projects as a foundation for the formal testing project.
2. Carry out operationalization training in Plant A and Plant B of Company C.
3. Carry out a perception survey to ascertain a baseline.
4. Having formed PAR change teams, mentor and coach the teams and plant leadership through the change process.
5. Carry out a second perception survey to measure change.

3.7.1. Summary of Key Learnings from Preliminary Projects

Before moving onto the formal and final project of this research, it is important to summarize the key learnings from the preliminary projects. These key learnings will inform the final project, showing the effectiveness of PAR in demonstrating the efficacy of the 20/20 LEADERSHIP model.

- Key learnings from School Project, AR Cycle 1. 20/20 LEADERSHIP promotes building bridges focused on what individuals have in common, rather than what divides them. 20/20 LEADERSHIP in PAR builds team ownership of solutions. Engaged empowered individuals can find solutions to problems using 20/20 LEADERSHIP in a PAR environment even when there are longstanding problems. The 20/20 LEADERSHIP mentor can only move at the pace of change that the individual or the team can absorb. 20/20 LEADERSHIP can be the vehicle to build a quality of relationship where every interaction is an opportunity for growth.

- Key learnings from School Project, AR Cycle 2. Leaders must focus on the vision and set expectations in order to keep the team moving forward. The team will engage when they see the outcome will improve personal concerns and conditions. The team has the capacity to find their own solutions when given the trust and space to explore options. 20/20 LEADERSHIP can be an enabler when making transactional leadership subservient to doing the 'right thing' using 20/20 LEADERSHIP. Leaders can guide teams through dogma to achieve the team and business objectives.

- Key learnings from Company B, AR Cycle 1. Sustained change in business is achieved through small internally generated iterative steps rather than externally introduced 'big bang' leader-isolated ideas. Indeed, when 'big bang' problem solutions are introduced by external actors, there is poor record of sustaining that change. When an engaged and enabled team explores their own change, solutions will be found for which at the outset of the problem, questions had not even been considered. When solutions are discovered and owned by the team the solutions are sustained. The researcher needs to keep the team focused on the vision as side discoveries though interesting can derail the process. Through success, the team generates its own energy.

- Key learnings from Company B, AR Cycle 2. Team engagement creates its own energy so long as the change does not outpace the ability of the team to absorb the change. Decision-making can be delegated to the lowest levels of the organization. Even within a PAR and 20/20 LEADERSHIP culture, leadership can still be a bottleneck. Leading change from the middle of an organization is completely possible but the leader needs to commit to their own authenticity and understand the extra effort (Principle 11) that will be required to lead over the long term. However, total cultural change in a business is rarely completely successful without the visible buy-in of senior leadership.

- Key learnings Company B, AR Cycle 3. 20/20 LEADERSHIP delivers results and team energy spreads to other teams without input from the researcher. Teams want to improve their own work communities and do so when they are trusted and respected and when leaders remove the barriers. Teams who see their leaders model transparency and authenticity, begin to demonstrate that same transparency and authenticity over time. Mentorship using 20/20 LEADERSHIP produces agile leaders who change business. Though the 20/20 LEADERSHIP leader wants every team member to grow. However, not all individuals on an AR team may be converts; in such cases, the 20/20 LEADERSHIP leader must do the right thing for the business. Transcendent behavior can be a natural outworking of commitment to sustained 20/20 LEADERSHIP. Leaders need to prepare the team and then trust them to act in the best interests of the company and the community. These practice-based lessons now inform the final AR Project.

1.7.2. Company C, 20/20 LEADERSHIP Operationalization Training Course.

In order to implement 20/20 and PAR in Company C, I designed a course to train workers in the 20/20 LEADERSHIP model which was applied in the formal testing phase of the research project. In 1987 whilst serving as an NCO in the RAF I was selected for training as an engineering instructor to teach at the RAF School of Technical Training. The standard methodology used for teaching in the RAF at that time was called Systems Approach to Training (SAT) which uses a gap analysis between current knowledge and required knowledge and then breaks down the required teaching modules to bridge that gap into training objectives and enabling objectives. Having completed instructor training, I spent five years teaching at 1 S of TT, and on leaving the RAF then continued lecturing in industry and as a Keynote Speaker at International Manufacturing conferences. These experiences were foundational in enabling me to design an operationalized version of the 20/20 model.

Students fell into two distinct groups: new leaders yet to take a supervisor role; and current supervisors, some of whom had undertaken some practitioner training. The first step in designing any training must be 'knowing the audience' so the training can be pitched at the correct level. This I had already ascertained in the short time I had worked in both the plants as a company OPEX Manager. From this it was obvious that the training would have to be practically based and, if theoretical sessions would be included, they would have to be pitched correctly and kept as short as possible. I would also use each of the training sessions to model 20/20 LEADERSHIP principles, use a participatory approach and ensure that the training impacted the workplace as quickly as possible.

I designed the training around the 20/20 LEADERSHIP principles using the shop floor for GEMBA, RCPS, OBC and on-the-job training. As part of the training each student selected a manager or supervisor as a mentor and chose an improvement project through which they would be mentored over a three-month period to consolidate training. A strong emphasis was placed on building relationships, participatory working and using every interaction as an opportunity to grow the business through the efforts of its people. Key to this training was that plant leaders wanted business results and not just an academic exercise. Therefore, training had to walk hand in hand with measurable results for leadership.

In this harmonized approach to training and business, the Plant leaders and students were able to apply the operationalized principles from the first morning of training, and thus quickly impact the business. Post operationalization comments of the students are to be found as Appendix 15, but a selection is reported below:

Ty. – "I need to build great relationships with co-workers. I need to work on good listening skills, listening is key not pointing fingers.

St .– "Know your people, listen to the machine operator, he knows his machine better than anyone. Lead by example even the dirty jobs."

Ke. – "Build Relationships. Be strong, step-up, be confident. Learn how to talk to people. Work on morale."

J. – "Take plans from everybody to make sure the right plan is chosen and in place".

P. – "Try to use everybody's ideas, sometimes it might not work but only allow a plan to fail once."

J. – "Due to this training, I will be able to make better decisions, employee good delegation and have accountability to myself and others above and beneath me."

Further to the student comments above, Figure 15 is a typical email received from one of the students for whom I was a mentor. This leader 'Re', who was a Plant A, 3rd Shift Supervisor, had asked that I be his mentor for the duration of the project and beyond. Re sent this assessment to me 3 months after 20/20 LEADERSHIP training as I was at that time based at another site and therefore could not conduct a one-to-one coaching session with him. All I had asked for was a progress update. The headings he used and what Re chose to report were completely his choice.

Tony,

These are the three things that I am working on as of now. I am still coaching every day. We are now doing an active safety huddle every Monday. I now give all team members a chance to perform training for each task and when possible, place them in a leadership role. This is boosting up workers morale and building confidence.

Development

- Being able to communicate with the team so they work together as one unit.
- Having the team understand growth is a team effort.
- Making sure the whole team does better at the job.

Reason

- Making sure everyone knows why and what job/task they are performing.
- Being able to listen.
- Being able to offer positive reinforcement.

Understanding

- Knowing that everyone is not the same every day.
- Understanding the fact that everyone does not learn at the same pace.
- Understanding the fact that some team members need more attention than others.

Re

Third Shift Supervisor

Figure 15. Email from Participating Student.

3.7.3. Research Approach, Methodology and Methods for Testing the 20/20 LEADERSHIP Model.

The purpose of the remainder of this thesis is to formally test the 20/20 LEADERSHIP Model to demonstrate its efficacy and utility as a vehicle for personal and organizational development and the promotion of operational excellence. The final project took place in Company 'C'.

Organizational Justice

According to Daniel Wester, (Cropanzano, et al., 2007), organizational justice has the potential to create powerful benefits for organizations and employees alike that include greater trust and commitment, improved job performance, more helpful citizenship behaviours, improved customer satisfaction and diminished conflict. Cropanzano, et al. (2007) states that members of teams that practice organizational justice sense when they are being treated fairly and respectfully. Cropanzano, et al., (2007) also say that justice defines the essence of the individual's relationship to their employer's distributive, procedural and interactional core dimensions. While organizational justice borrows from these older traditions, it has its own distinctions. Organizational justice is core to business development. However, I was unable to find organizational justice aligned with tikkun olam described in academic or other literature which is a current research gap. Both tikkun olam and organizational justice are people-focused and should be related to business. Tikkun olam motivates Jews to repair the world to hasten the arrival of the Messiah, whereas organizational justice is motivated by a compulsion to do the right thing within organizations.

As defined by Cropanzano et al., (2007), organizational justice is a personal evaluation related to the ethical and moral standing of managerial conduct. As tikkun olam is a mitzvah, the individual operating in an 20/20 LEADERSHIP environment needs to be centred in a place of higher standing than purely managerial conduct. Justice must matter to the leader as much as to the employee, (Cropanzano et al., 2001). Folger (2001) suggests that it is important to acknowledge that employees prefer justice because it allows them to predict and control outcomes that they are likely to experience from organizations. This compassion and fairness in actions and relationships extends to other psychological elements of work such as happiness and belonging, as is detailed in Maslow's hierarchy of needs. This helps with being able to form a model of leadership as the morally appropriate way others should be treated, (Folger, 2001).

There is more to organizational justice than just equity in dealing with employees. Cropanzano et al., (2007) also posit that we can apply three allocation rules to organizational justice: to each the same, to each in accordance with contributions, and to each in accordance with the most urgency.

Employees who are justly treated are more likely to comply with work-based policies, show extra conscientiousness and behave altruistically toward others, (Cohen-Charash and Spector, 2001). Indeed, workers tend to tailor citizenship behaviours carefully, doling them out to those who treated them justly and withholding them from those who do not. This justice can be a core value that defines an organization's identity. Organizational justice can also be the core of particularly difficult points in industrial life such as hiring, arbitration, disciplining and firing; if you cannot give people the outcome they want, at a minimum one can provide is leadership over a fair process. Tikkun olam goes further than this, demonstrated by a leader who will lead uncompromisingly with a view to social and organizational justice, repairing, nurturing, and building.

Cohen-Charash and Spector (2001) make the point that organizational justice helps managers to make difficult decisions more smoothly. This allows employees to have confidence that they are being dealt with fairly and that power will be used in accordance with principles that respect the dignity of all involved, (Cohen-Charash and Spector, 2001). In my view this is sound and tikkun olam aligned business advice so aligned with a leadership paradigm such as 20/20 LEADERSHIP which gives the leader a set of signposts or principles to help them be mindful of the right thing to do. This will consistently develop the team and therefore grow the business. Thus, the consistent and committed practice of organizational justice will lead to organizational development.

<u>Company C</u>

Singularly focused on production in a vertically integrated company, raw material is 100% post-consumer waste. No leadership development program. Two Plants in Company C, are subjects to this research known as Plants A and B. Plant A produced flat stock for book covers, folders, and furniture board. Plant B had two production lines one manufacturing tubes and cores on spiral wound machines and the second manufactured protective corners for palleted goods (PAB).

Practitioner Responsibility

In my practitioner role as a corporate OPEX leader in Company C, I had responsibility for plants across the USA so spending extended periods of time at two sites was difficult. However, to enable some continuity I arranged to spend several weeks at Plant A and Plant B enabling me to focus on this research. The lack of opportunity to stay in one location was a real-world constraint of these practice-based projects. This was a limitation for longitudinal research and discussed throughout this thesis. This final 20/20 LEADERSHIP testing phase was carried out using a mixed methods approach, the qualitative elements of which replicate those used in Part 1, using focus groups, interviews, and Reflexive Thematic Analysis (RTA). RTA in building the 20/20 LEADERSHIP model was carried out at the semantic level, the RTA analysis on the impact of 20/20 LEADERSHIP on the new leaders will be carried out at the latent level. Braun and Clarke (2006 p.13) state:

> *"….a thematic analysis at the latent level goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions, conceptualizations and ideologies that are theorized as shaping or informing the semantic content of the data."*

Latent RTA will provide data on the changes in attitudes of employees toward their own leadership practice and interaction with their teams and what they have learned about themselves and others as a result of training and practicing PAR and 20/20 LEADERSHIP.

Two quantitative tools will also be used to measure business improvement. The first tool, which is under the control of the researcher, is a perception survey (Rea and Parker, 2014) that will collect data to measure changes in employee's perception of their work environment due to changes in how they are led using 20/20 LEADERSHIP. The second quantitative tool, under control of the company, and therefore independent of this researcher, is published Plant OEE (Overall Equipment Efficiency) data which will be used as an independent balancing metric. The perception survey will be analysed using a one-tailed, non-paired T-test to measure empirically the changes in employees' perception in three key areas that the business identified as the main areas requiring change for organizational development.

These quantitative methods will be triangulated with the qualitative methods to form a final determination on the efficacy of the 20/20 LEADERSHIP model. Triangulation seeks convergence or corroboration from different methods of analysis to illustrate convergent validation of a hypothesis or phenomenon (Fielding, 2012). In this research, I will be applying concurrent triangulation strategy

(Creswell, 2009) to ascertain if findings from qualitative and quantitative methods reach the same conclusion of data collected when derived in parallel, each analysis benefiting from each other. Quantitative will have the benefit of qualitative social interaction and qualitative benefiting from statistical analysis of quantitative methodology.

3.7.4. Quantitative Analysis

In confirmatory research such as this to confirm the utility of the 20/20 LEADERSHIP model, quantitative analysis may begin with a hypothesis that can be subjected to statistical testing methods. The hypothesis to be tested is:

> Application of the 20/20 LEADERSHIP model will improve the business and perceptions of the employees about their work environment as indicated by an increase in total score on the perception survey, without negatively impacting the balancing metric of OEE.

The tool chosen to gather data for testing this hypothesis was a perception survey which was applied before and after the business change had been undertaken. This instrument is an adapted subset of the Shingo model data collection tool (Shingo, 2016). To add an additional level of rigor, my perception survey was peer reviewed by my peer group of six OPEX managers, the VP of manufacturing and my VP OPEX line manager. Other than for a few minor changes, the survey met with agreement by all but one of my peers who had a very useful suggestion. He observed that I was initially giving attributes scores that would be summed to achieve a minimum acceptable score for an organization’s culture, and that this was not helpful or necessary and that we should be striving for improvement and not just a benchmark minimum score. On reflection, and even through the Shingo model did aim for a minimum score to achieve certification, he was of course correct. I consequently removed the need to reach a minimum score from the survey as it was more important at this stage for respondents to achieve improvement than to reach a pre-specified target. This example of collaboration with peers shows how inclusion of others in decision making adds value to the business (Principle 7).

A K-A. Reflective Practice.

This echoed the decision making I experienced in the RAF, where I never led alone and rarely had to make isolated decisions. Making oneself vulnerable to the input of others added value to the research and the business. I also found that collaboration was also affirming, built mutual trust and self-confidence.

Method

The perception survey was carried out in an identical way in both Plant A and B in Company C. Each plant has three shifts each day, and I attended each shift handover at 6am, 4pm, and 10pm to conduct the perception survey. I explained the purpose of the anonymous survey and how the survey was to be completed. The survey tool was a single A4 sheet containing the three categories and marking guide. At each plant, individuals were asked to give a score from 1 to 5 on the selected three primary metrics.

At both plants, 100% of the shift leadership and employees completed the survey. Completion of the surveys at shift change took 15 minutes, and each respondent completed the survey separately and without discussion. No incentives were given for completion of the survey, other than that the data collected would provide leadership with the work forces' perception of what categories in the workplace needed to be the focus of change to improve the business. After the baseline survey was completed, it was explained that volunteers from the workforce would be sought to form the basis of a participatory action research team to work through the changes. Sufficient volunteers came forward to staff each of the three change teams at each location. It was further explained that the change teams would focus on understanding the root causes of the problems and then find appropriate solutions; Root Cause Problem Solving (RCPS) would be used to assist in finding the root cause(s) and 20/20 LEADERSHIP would be used as the leadership methodology to work through the change. Solutions would have the backing of leadership for implementation where it could be demonstrated that they would provide an improvement to the business. Lastly, it was explained that after 6 months, the perception survey would be repeated in order to measure any change.

Data Analysis.

The data gathered by the perception survey will be used to test the hypothesis using a one tailed non-paired T-test i.e. survey scores will improve. Failing to reject the hypothesis will be indicated by achieving a P value

< 0.05 i.e. there was a statisticaly signficant improvement in the perception survey scores. T-test will measure the impact of 20/20 LEADERSHIP across the entire population at each test site for all categories and for the results of each of the three main categories under test at each site.

In addition to the T-test, visual analysis of graphed data will be carried out to further analyse data patterns particularly where statistical analysis is inconclusive. In behaviour analysis, visual inspection of graphic information is the standard by which data are evaluated (Fisch, 1998). This visual inspection will not be carried out in isolation as the leadership teams of both Plants A and B will be presented with the graphed data and asked to participate in the analysis. Colón (2006) discusses the validity of assessing patterns in visually presented data and Wertz et al. (2011, p.399) caution that such qualitative assessment of data should be tested at all stages of the research to assess its "credibility or trustworthiness." Therefore, analysed data will be taken back to the teams and the leadership as soon as it is collated to ensure change steps are actioned based on agreed interpretation with the source population rather than on the sole interpretation of the researcher.

3.7.4. Action Research Project 3: Cycle 1. Industrial Performance Improvement Company C

Business Need

This final project took place in two paper processing plants, Plant A and Plant B in Company C and builds on the preliminary projects with the purpose of showing by empirical evidence that 20/20 LEADERSHIP as a vehicle in PAR works effectively to improve business efficiency. The balancing metric of Overall Equipment Efficiency (OEE) was used to ensure the application of 20/20 LEADERSHIP using PAR does not cause detriment to other elements of the business. Plant A's OEE was inefficient at 75% against a world class target of 88%. Plant B's OEE was inefficient at 64% with no world-class target published for its manufacturing sector though based on similar processes it should exceed 85%.

Company C had little evidence of a single culture across business units. Having now visited company sites in seven states across the USA, the dominant culture is largely that of the previous ownership and what has evolved because of isolation from centralized leadership. Company C acquired these locations over a period of eight years and apart from a poster on the wall, it was my experience that little was ever done to build a unified culture with the new acquisitions. This may well be the result of the company ownership being an investment group that was interested in profitability and re-sale in the short term to maximize profit, rather than establishing a company culture for long-term ownership. Culture statements should be displayed as I did in this research, but cultural change is much more than a poster and needs effort in direction and organization. By act or omission, leadership determine organizational culture (Schein, 2010) and the demonstrated culture at the start of this project was rarely that on the company poster. Plant B progressed further along in establishing a culture around the 20/20 LEADERSHIP model during this study due to leadership's openness to change. In truth, though 20/20 LEADERSHIP kick-started the process of cultural growth at Plant A, they were not ready for this initiative. Readiness for change is essential and discussed in more detail at 3.9.11. Key to cultural growth is an explicit understanding of the values and expectations of the organization; one must take time to understand the starting point before engaging in cultural change. This research was the genesis of this understanding but at Plant A without my continued input I fear the growth will not be sustained. This is important when the aim is to nurture sustained business culture (Robinson, 2017) and growth which is intended to thrive in a climate of 20/20 LEADERSHIP, allowing individuals to reach their full potential.

Both Plant A and Plant B had tremendous opportunity for business improvement not only in productivity but in growth of people in their work communities. However, both plants had also seen many business improvement initiatives come and go. Therefore, I reflected with the Plant B GM that this project should be viewed as a focused continuation of their journey rather than a new journey. 20/20 LEADERSHIP and PAR were then accepted as a continuation of previous success rather than another start; as many of the tools of Continuous Improvement (CI) such as, RCPS, 6S, SMED, LSW, etc. had all been seen before but had not been sustained. A further difference on this occasion was that the project needed to achieve a Tipping Point, (Gladwell, 2000) that would stick (Heath and Heath, 2008) and in this case that difference would be cultural change using 20/20 LEADERSHIP purposefully to drive cultural and business change though people changing their own environment. The Plant B GM quickly saw that this reframing could make this engagement different to those that had gone before with the addition that 20/20 LEADERSHIP and PAR would become the sustainable framework for change.

Leadership competence

Company C has no formal leadership training for new leaders or development program for established leaders, so the leaders just perpetuate what they have seen from others, good or bad. They are largely reactive and are not aware of what proactive values-centered leadership looked like. This was an advantage for this study in one regard in that due to my relationship with them they were very eager to learn. However, my concern was not to focus me leaving a legacy of my leadership, (Shirey, 2014; Warburton, 2014) rather, enabling 20/20 LEADERSHIP and PAR to allow the team to develop their own leaders to the point they could sustain business without my influence or authority.

Planning Action - The Perception Survey

The final project necessitated baselining the state of the business in order to have an empirical data set from which to measure perceived improvement. An initial survey was completed by the plant employees to measure the perceived initial baseline, methodological detail is listed with the separate plant project details. The survey was repeated six months later to measure the business change as perceived by employees and leaders. Ideally, I would have liked to retake the survey after say a year; however, it would be exceptional to be able to spend six months on this project without being reassigned. As it transpired, a few months after the second survey the company was sold and had I not already completed the second survey it would have been unlikely that I would have been able to complete the survey under the new owners; having been given notice of redundancy at two weeks before the acquisition was completed as my team was being disbanded as a synergy saving as part of the purchase. My experience was that industry is not conducive to long term industrial social studies. Perhaps this is why so much of AR literature comes from HR and the health service which is more stable?

3.7.5. Modification of the Perception Survey to Meet Organizational Needs

The leadership of Plant A and Plant B had different approaches to which of the sixteen categories available on the survey they wanted to improve and consequently measure based on local need. Plant A wanted a new category added as they wanted to measure Leadership, Morale and Team Building, categories which they considered to be problems, or at least problems in the perception of the leadership. The two categories on the original survey of Plant Management and Work Environment were relabeled and amended to Leadership and Team building respectively, to accommodate local leaders. On the original survey there was no category of morale, however the Plant A manager particularly wanted to improve morale. Measuring morale is not truly possible (Francis, 2012), though measuring the employee's perception of the improvement in their own morale should be possible. This would be as a result of improving the employee's experience of their community by reducing or removing barriers to poor morale such as inadequate leadership or little effort placed on training or team building. The purpose of the PAR teams is to find these problem solutions move the organization positively on each category. The completed Plant A survey as seen by the workforce is at Table 4.

Category	1	2	3	4	5
Team Building	No teamwork, lack of focus	Team only pulls together when directed	Team is learning to pull together	Team is working well exceeding some objectives	Team is exceeding all objectives
Morale	Very bad	Could be better	Morale is OK	Things get better all the time	Could not be better
Leadership	Leadership team is weak	Leadership gets the minimum accomplished	Generally good	Leadership is driving the business	Has inspired me to be a leader

Table 4. Plant A Perception Survey

Plant B had issues in operating with parity and organizational justice as until recently two essentially different businesses had been operated under one roof with separate leadership. These organizations had different leadership styles, different products, different polices, pay and HR rules. The GM asked if a category could be designed to help understand the issues and use these issues in a focus team for organizational development to bring the two departments together. Plant B GM also felt that the original 16 categories would be too many but wanted the teams to select the categories for change. The GM and Production Manager therefore down selected the 16 categories to 10. Once the results of the survey were collated the three lowest scores would be the change focus for the PAR teams.

As with Plant A, the descriptors were simplified so that the work force including many who have English as a second language would be able to understand each and then score accordingly. Once the Plant B scores were collated, the lowest scores corresponded with the categories of Attendance, Organizational Justice and Communication. These categories highlighted on Table 5, were agreed as the three categories to be taken forward as the first needing change to improve business and to test 20/20 LEADERSHIP.

Further research opportunities would have been available if both Plants had selected the same categories. However, this is real-world, work-based-learning, and research considerations take second place to those of the business need. In addition, this research is not about a comparative analysis of improvement of categories in two plants but rather the use of 20/20 LEADERSHIP and PAR to improve business.

Category	1	2	3	4	5
Leadership	Leadership is weak and relies on shop floor 'experts'.	Leadership does what is required.	Leadership are the plant fire fighters.	Leadership is proactive meeting the need.	Leadership is inspiring and driving innovation.
Communications	People do not know what is going on.	Some sporadic communication.	Routine meetings enable two-way exchange.	Communication happens naturally at all levels	Quality communication drives the business
Attendance	Call-offs and no-shows are the norm.	Attendance is generally good.	This is a good place to come to work. .	I come to work to be with my co-workers.	Employees are our best recruiters

Table 5. Plant B Perception Survey

A K-A Reflective Practice.

I met individually with the senior managers in the two plants with whom I would be working. As stated, the perception survey as I originally designed it had 16 categories. Plant A wanted only 3 categories presented to the employees on the survey. I went with their choice but on reflection, Plant A choosing only 3 categories was more a comment on the leadership's preconception of 'what the employee could cope with,' rather than what would have been useful for the organizational change. I determined to frame this differently when working with Plant B so they would have a better data set for later change cycles. The plant management felt that a maximum of 10 would be within the capabilities of their employees.

Data collection is time consuming and costly. I was conscious of the need to balance the impact on the business of taking the data at shift change, with the value that this research would provide to the business. Completing the ten-category survey with my introduction took around fifteen minutes per shift which was paid overtime.

The employees were very open to the survey and to the opportunity to have an impact on their work environment. The GM and I were also very mindful that we were raising an expectation with the employees of their inclusion in change to which they would rightly hold us accountable. This was a change of power dynamic impacting organizational politics to which we would have to pay close attention. Enabling the employees to manage change for themselves and being encouraged to impact their own environment was new to them and positively received. It was also an opportunity for leadership to engage in a new relationship with employs demonstrating respect and equity.

A K-A Reflective Practice.

Influencing Plant B to take 10 categories rather than allowing Plant A who then only selected 3 categories was one phase of one cycle immediately influencing the similar phase of what could have been a separate cycle had the improvement programs not been happening almost simultaneously. This was also a new experience for me as in the past I had not had such a direct and intended impact on multi-location organizational change simultaneously. I felt the weight of how this would impact not only this research success but how I would have to manage expectations to retain credibility for the process of 20/20 LEADERSHIP and PAR with the expectation of senior management that I would achieve a sustained improvement in the business culture and metrics. Through this process I consciously had to balance risk and reward both for this research and the value to the business.

Taking Action

I separately introduced the workforces of both plants to the perception survey, explaining that we were building participatory projects to improve the business through how the teams experience work, and together we would design actions to promote business growth. The plants would then discover opportunities for improvement planning and carrying out actions for change using PAR change teams. The survey would be repeated after approximately six months to measure if the PAR teams' actions had resulted in perceived change. Each month, I would obtain an update from the change teams to review progress and provide coaching as required to keep change moving forward. Coaching and mentoring would be used to facilitate change and new processes would be designed to provide precision, accuracy, and repeatability of industrial processes.

Modelling, Mentoring and Coaching

Both mentoring and coaching offer valuable developmental support to business leaders. Importantly, leaders must understand the difference between mentoring and coaching, and further understand that these techniques are complementary though not interchangeable. The strength of using modelling, mentoring, and coaching with 20/20 LEADERSHIP is in the transfer of knowledge from the practitioner to develop others as acolytes or to enable person-centred-learning that promotes business growth and develops followership and business continuity.

Mentoring was key to my RAF service both being mentored by my line managers and as a mentor as soon as I was given my first leadership rank. Moses' father-in-law Jethro through mentoring passed his wisdom to Moses. Moses in turn mentored and passed his wisdom to Joshua. Mentoring is a long-term relationship focused on supporting growth where the mentor who is experienced in the field is the source of wisdom, teaching, and support, (Reh, 2019). A successful mentoring relationship needs to be a synergistic relationship between the mentor and mentee in which both parties will benefit, (Sharma and Freeman, 2014). Mentoring offers practical guidance to individuals who want to cultivate and manage ongoing developmental relationships, either as acolytes or as mentors via formal or informal relationships (Chandler, 2013).

Coaching typically involves a relationship of finite duration, with a focus on behavior modification, (Lee, 2005). If a coach can help a leader change how they think about an issue it will change how they act toward that issue, (Dyer, 2009). Coaches help professionals' correct behaviors that detract from their performance and strengthen those behaviors that support stronger performance around a given set of activities.

Modeling in the context of this research is consistently demonstrating the principles of 20/20 LEADERSHIP in the work environment. This is what I have also described as leading and influencing behaviors by example.

AKA Reflective Practice:

I sustain 20/20 LEADERSHIP through my Jewish faith; others sustain leadership through their own morale or religious code. I therefore need the 20/20 LEADERSHIP model to be self-sustaining as a moral code without the model becoming pseudo-religious. I am not looking for individuals to convert to 20/20 LEADERSHIP, but I do need individuals to make a mind switch to a new way of thinking and doing things which principally will come through coaching. The model needs to offer a set of simple principles, for leaders to access as a source of change that they in turn can pass to others. These principles will be reinforced through modelling, coaching, and mentoring.

Leadership coaching was used in both 30-minute formal office settings with stated objectives and informally on the shop floor during the PAR projects, taking just a few minutes. Coaching hones an individual's skills be that Tiger Woods' using a swing coach, or an executive coach increasing a business leaders potential. Examples of recording leadership coaching sessions can be found at Appendix 12.

The overarching aim of leadership coaching is the development of authentic leadership, (Lee, 2005). By engaging with an individual at a personal trusting level, the individual becomes open to the growth of authentic leadership. The coach encourages individuals to overcome their own barriers to growth. Those barriers can be as simple as enabling them to understand that they have the right to grow or as complex as enabling them to overcome the modern western plague of poor self-esteem, (Branden, 1995), that cripples individuals at all levels and in all types of organizations. The coach enables the coachee to discover opportunities for behavioral change in their own time through person-centered-learning, (Rogers, 1967), which is key to sustaining the change. Coaching also opens the individual to such transcendent values as happiness, wholeness and feeling fulfilled. Working on transcendent values leads to outcomes where the ‘whole’ person benefits. In the PAR projects, coaching change was rarely a quick process, but it invariably meant that the individual being coached became a more committed corporate citizen.

Measuring the Results of Mentoring and Coaching

Mentoring and coaching were used throughout the PAR cycles to facilitate person centered change. However, coaching must show business not just personal results. If an organization is bringing in coaches or employing coaches, what is the return on investment? Isolating one change such as coaching in a multi-change complex environment and stating that it is the reason for success is both ungrounded and dangerous without specific cause and effect. Also, industry is not a clinical laboratory where one change at a time can be isolated and measured. Coaching and mentoring in the package of 20/20 LEADERSHIP change did contribute to measurable results in reduced down-time, improved quality and improved OEE. However, focusing on results in themselves stands in tension with a more open-ended coaching style, Lee (2005). The danger of a results focus is that it can constrain coaching conversations to an exclusive focus on actions. This was a concern with having to follow a ‘company coaching model,’ which was the case in Company C but not in Company B.

Using Lee’s ACE model for change, Lee (2005), was very useful in being able to brief coaching sponsors on the potential of coaching individuals and groups. The coach needs to show that, as a result of coaching, actions, feelings and thinking have changed overtime. One cannot empirically measure the increased value of an employee who has overcome a barrier, but one can measure the improved result of their actions on the business.

AKA Reflective Practice:

It was particularly gratifying for me that that the key learning reported immediately after the operationalization training was in the area of growth of followers. This change was positively received by the senior leadership in both plant A and B. As future research, it would be interesting to come back to these students in two or three-years’ time and compare how better prepared they were for leadership compared to others who had no leadership training or training other than 20/20 LEADERSHIP to make comparative observations. The student’s comments were beneficial in refining how to operationalize the theoretical model more efficiently and are analysed using latent RTA as part of the qualitative analysis to demonstrate the value of 20/20 LEADERSHIP.

3.7.6. Feedback after Operationalization Training

Both plants undertook 16 hours of 20/20 LEADERSHIP training. After the training I asked for the students to provide comments to me that would be shared with their leadership to enable them to assess the value of the training. Comments received include those below, some of which are from those with English as a second language:

Plant A.

S. – “This training was good to me to help my co-worker ready to move the product in a great form (sic).”

Tm. – “Due to this training, I will be accountable for my decision making.”

R. – “Due to this training I will be able to become a better leader.”

Jn. – “Leadership is relationships. I have to connect with my co-workers both bosses, peers and those I lead. I have to know people to get the best from them.”

Dd. – “I have to own it. There is no they, there is only we and our responsibility.”

Re. – “Communication improvement is a journey. I must communicate problems consistently to my leaders even when it is repeating the same things that are out of my control to fix. Be persistent.”

Plant B Comments.

These comments, transcribed verbatim, were made in a group setting to both the researcher and the plant GM after 16 hours of training.

Tr. – Plant Manager – “This is the first time in my career I have received such “relevant and impactful training”. The effect of this training is “paradigm shifting.”

T. - “Leading putting people first builds friends.”

T. - “I am becoming a coach not just a teller.”

T1 –“ I am accountable for how the plan is executed.”

M – “I must keep everyone working in the same direction.”

J1 – :Take plans from everybody to make sure the right plan is chosen and in place.”

Ed. - "This training has opened my mind opened a door about what is leadership. This training tells me what I want to be, helps me know how to be with people what to do on a daily basis about taking people from the beginning to the end (sic)."

These and other comments are reported in Appendix 15. These comments were subject to the second RTA and provided valuable feedback for revisions of the training and on how these new leaders skills would impact the business. This feedback was analyzed using RTA.

Action Change Teams.

I then brought the entire staff together for the data collection at their separate plants and explained that I wanted their perceptions of the categories on the survey. These had to be their personal perceptions and not influenced by leaders or co-workers. After the survey Plant A asked that we immediately begin building the change teams and enacting the change. Plant B had these follow-up questions:

Q1. *"How to proceed from here?"*

A1. Build the PAR groups from those who volunteered at the baseline data collection meetings to diagnose the problems. Using the action research cycle and create plans for improvement. There is a problem with allowing just volunteers to populate the PAR teams as this is self-selection bias and they could just be serving self-interest, however volunteering also speaks to a desire to see change. The plant leaders recognized this and as a result asked other team members to also participate to provide balance to each team. It also added some constructive discussion and conflict that the teams had to navigate to achieve consensus.

Q2. *How can we engage the change teams using the 20/20 LEADERSHIP?*

A2. Firstly operationalization training, and then using PAR as a change model.

Q3. *"How long to effect a change?"*

A3. Measurement of change will be set by the 6th months of this AR cycle. This would not be adequate time to maturity of process change but we should be able to measure early change.

Q4. *“Who makes up the change team?”*

A4. Mixed teams of volunteer leaders and hourly staff with facilitation by the researcher. Added to these will be individuals who would be asked to engage and provide balance.

Q5. *“How will the teams be managed?”*

A5. Self-managed with mentoring and coaching oversight.

Q6. *“How does the work force get involved with the change?”*

A6. By generating ideas, participating in the change and via constant communication.

Q7. “*How do the teams communicate the change?”*

A7. Successful teams used a communication board, focus groups and one-to-one conversations.

A K-A Reflective Practice. *Neither location’s teams fully exploited communicating the effect of the change as a force multiplier for organizational development despite repeated encouragement so to do. This slowed down change in some areas, as talking about change success is also a driver and force multiplier for change. This needs to be more fully understood and would be useful future research to understand why they did not communicate their success.*

Q8. *“How do we select the teams?”*

A8. Teams had already largely selected themselves as part of the answers to first survey. The number of volunteers who wanted to engage with change surprised both sets of leaders.

Q9. *“Should each team have a neutral leader?”*

A9. Each team did have individuals who took a leadership role and often they were not the most senior or expected ‘natural’ leader. Many of these were also identified by plant management to be potential members of a future FLC.

Q10. *“How do we make sure the change teams don’t come up with an answer we (Senior Leadership Team) do not like?”*

A10. They might, such is the nature of asking for grass-roots contributions.

A K-A Reflective Practice.

The post debrief feedback was a good confirmation from the leaders that the survey was valid and had come up with the problems as they saw them. This often seems to be the case; an audit confirms what the teams already 'know'. This makes one wonder why it is that if leaders know the problems, why do they not do something about fixing the issues themselves? Are they missing the leadership training skills, the motivation, or the imagination?

After the leadership debrief of the first perception surveys at both locations, change teams formed to work on improving the three lowest scores.

Plant A had selected the three categories of leadership, morale, and team building. Plant B top three categories self-selected from the lowest scores of the ten categories measured on the perception survey were poor attendance, organizational justice (tikkun olam) and communication.

Plant A. Team Building - Inventory Management PAR Team.

Plant A needed opportunities to build teamwork and the team building focus groups stated that a huge frustration was the lack of inventory control across the four warehouses. Production personnel did not know where to store part-processed or finished product and they could not find space to store an entire order in one place. Consequently, product was stored wherever a place could be found in one of the four warehouses. Shipping could not find finished product for loading to the customer and as a result were taking up to two hours to load a truck rather than the expected forty minutes. This was a frustration to individuals and both costly and inefficient to the business.

KW was one of my first 20/20 LEADERSHIP and PAR operationalization students. KW used his warehouse team to look at the problem. They diagnosed a series of issues RCPS. They found that the solution should be to organize the warehouse into numbered lanes in which to store product. The team designed a process with documentation, then trained the fork truck operators how to enter locations into the computer warehousing system and what to do if a product was moved to a temporary storage bay. This reduced loading time by half. Ty, from a second 20/20 LEADERSHIP training class who worked for KW then led a second team to study how long each fork-lift truck driver took to load a lorry and ascertain the barriers. Removing these barriers further improved the loading time and resulted in a major warehouse reorganization restructuring from numbered lanes to storage by customer and then lanes. Each customer now had their own warehouse lanes with numeric locations. This second cycle led by Ty and her team was still in progress when this research was concluded. This is an example of a high level of participation as defined in 1.2.5.

Improving the warehousing process improved retrieval of part processed and completed product. This change improved loading time and reduced the amount of lost product and the number of late deliveries to customers. This streamlined processing reduced working hours and the number of fork-lift trucks that needed to be available. This project was particularly gratifying as Ty saw the need for the further AR cycle and rather than being facilitated by me, she was facilitated and mentored by KW. This was a second-generation project without any intervention from me other than mentoring. In addition to removing a business barrier, they also improved morale by removing a long-time frustration: wasting time having to look for product. Importantly it also showed that this team were now exercising the 20/20 LEADERSHIP and PAR tools for their own success.

3.7.7. Plant A, Morale PAR Team

The first meeting of the morale PAR team was somewhat antagonistic as the employees were unfamiliar with managers asking them for their opinions. They therefore took the opportunity to 'vent'. However, the department manager was expecting this and allowed them to let off steam. This paid off as the second meeting began and ended productively.

A K-A Reflection.

This venting was to be expected as they had a great deal of pent-up frustration based on feeling that they had been ignored and undervalued for many years. Now for the first time they were liberated, and they took the opportunity to let deep feelings come to the surface. This venting was in fact very healthy and as the department head (as a PAR team member) went into the meeting prepared, it became a positive experience. Conflict cannot be avoided in change, but it can be led with understanding through intelligent preparation, kindness (chesed) and a willingness to do the right thing (tikkun olam) with respect and humility.

This new openness, transparency and honesty had an almost immediate effect. These employees just wanted to be asked, included, and 'feel' valued. Even though the team was looking for ways to improve morale in the workspace, 20/20 LEADERSHIP had quickly opened them up to each other. They began bonding socially, shooting pool together after work, going to each other's children's sports events and going bowling together. The department manager went to see a co-worker's son's rodeo, which was appreciated by the parents and was talked about for weeks after by the employees. Then from the social bonding came the work bonding. Many in the department started talking about and began problem solving without leadership input. Rather than referring problems to managers, they were walking around the plant talking with other co-workers and solving problems together. We saw an improvement in OEE as a consequence of the change team discussing and acting on problems together. The department manager held a discussion about building morale across the entire plant with the GM, which resulted in a summer safety fun day with dunking stools, a cookout, and gifts for everyone. This event further broke down barriers and built new relationships between individuals who had been under the same roof for in some cases more than twenty-five years. This relationship building is core to 20/20 LEADERSHIP to repair and build bridges. However, I was then tasked with spending more time at other sites and the change meetings were not kept up and many saw the end of 'another flavor of the week' and reverted to old ways of working. The department manager did not keep the PAR team moving forward and I had to re-establish the program on my return. This was specifically commented upon at the second survey data collection meeting. Though change quickly regained momentum on my return, we had another problem in that I was in the difficult position of now being seen more as the department leader than the actual leaders. This would only be addressed when the changes became systemic i.e., sustained without the author's presence.

A K-A. Reflective Practice.

I quickly had to take a step back from the shop floor and instead spend time coaching and motivating the department manager and his supervisors. The managers had to own and stay committed to the change to 20/20 LEADERSHIP using PAR. I believe there had not been enough time working with the teams before I had to leave the department manager to drive and sustain the change to create local ownership. This impacted the second survey as employees were unhappy that the change was not sustained as they perceived that it should have been. However, after spending another 4 months with the department manager he was engaged, and the 3 project areas improved achieving a record production day. Baseline plant OEE is now under discussion for a target increase from 82% to 85% having already moved during this project from 78% to 82%. Also 95% of the 1700 items on the product line now have improved an OEE figure.

3.7.8. Action Research Project 3: Cycle 2. Industrial Performance Improvement Company C

Plant B Change Teams

Communication Change Team

The communication team leader, the HR manager, met with all shifts to lead a focus group to understand what it was about communication that produced such a low score on the perception survey. In debriefing, her findings to the leadership team, she explained that she went into each meeting with the assumption that the shift would complain that leadership was not 'keeping them in the loop' with what was happening in the business. In fact, the common thread on all shifts was that work orders were not communicating the detail correctly of what they needed to manufacture. One operator said that "They keep asking us to make the wrong stuff, then we get a quality complaint." These poor work instructions also included packing labels printed by the logistics team which resulted in customers being sent incorrect product. A forklift driver informed me that, "I keep getting in trouble for sending the wrong products, but I just do what it says on the packing sheets." This was leading to frustration and manufacture of non-compliant product. Also, as there were no managers in the plant on third shift, employees would leave confusing work orders incomplete at the end of their shift and pass them off to first shift. They also communicated that there were many employees and temps that are not committed and "just here to get a cheque and go home." The teams were very complimentary that both the HR manager and the Production Manager were now spending time talking with all shifts to let everyone know what was going on with the PAR change process.

A K-A Reflective Practice.

This was useful input from the employees. The work order communication problems were a surprise to the leadership team who had preconceptions about what the teams would report as root cause. The leadership expected criticism for poor communication of what was happening with the business, but the employees wanted better communication in order to complete primary tasking. The teams became engaged far more quickly than I anticipated and with the operationalization training quickly began impacting the business. This is a function of relationship and empowerment.

I coached the HR manager that there were several positive data points from the focus groups which would provide six months' work after completion of this research project. This became the initiator of another internal mini-AR cycle for the HR manager to execute, though she would need to work with her team to focus on solving one problem at a time. She asked what she should do to get the team past just coming into work for the cheque. We discussed that she should now reach out to all the teams and let them know that we had heard what they had to say and would involve them in designing actions. Results build engagement, and as the work-orders would have the biggest impact on business, this became an ideal project for a PAR change process. The PAR change team asked the work force what they needed in the work order to make their day more efficient, equitable and to do the right thing for the business. This PAR team then passed their ideas to the technical manager, scheduler, and quality manager. They incorporated the changes into a new process and amended computer screens to collect the data. The new work-orders resulted in a reduction in re-work which increased OEE and reduced waste and employee frustration.

A K-A. Reflective Practice.

Though the team choose work orders as the prime communication issue, I got the sense that this was just the opener, the first layer of the onion. The teams were almost testing the leaders to see if they would truly carry through, as this was the first time the teams had been asked for their opinion and trust was a limited commodity. As leadership worked with the teams to solve the issue of poorly written work orders, trust started to build. I believed once the superficial problems were solved, we would get to the core issues.

The change leader wisely determined that it will be difficult to solve the deeper problems until the employees were engaged and became true corporate citizens and she wanted to understand how to use the 20/20 LEADERSHIP model to grow corporate citizens. I advised that engagement would come with trust built though relationships, mentoring and coaching over time. This was a positive start on this PAR element discovered on the engagement survey.

Plant B - Attendance Change Team.

The survey raised poor attendance as one of the top three issues. The team leader engaged with volunteers to build a focus group made up of all three shifts. The team decided that they should begin with a Root Cause

Problem Solving (RCPS) exercise which I facilitated. The RCPS found the following contributory causes to poor attendance.

a. No notice of weekend work.
b. Pay inconsistency.
c. An inconsistently managed attendance points system.
d. Temporary employees were being dealt with differently to permanent staff.
e. Time clocks were inconsistent.

A K-A. Reflective Practice.

During the RCPS, I had several opportunities to discuss the impact of social justice and corporate citizenship issues related to poor attendance and the importance of leadership setting expectations and holding people accountable, these being issues of organizational justice. Solving these issues through relationships would go a long way to repairing a broken system and broken relationships; a key feature of tikkun olam.

As a result of the causes of poor attendance revealed by the RCPS, the team published a list of action items that were followed through, communicated widely and the results of which contributed to the scores achieved in the second perception survey.

Work Roster

A roster was produced to ensure everyone would have advance notice of weekend work and ensure they received at least one planned free weekend a month. My concern in this was that they should get planned time with their families. Family is the heart of Judaism and needs to be the heart of 20/20 LEADERSHIP. It is also healthier for employees and the business if employees are enabled to have work life balance.

Attendance Points System

The attendance points system for missed work should be properly managed so that when an individual reached nine points, the published disciplinary action would be acted on immediately. The employees saw some individuals as not being held accountable when they reached discipline triggers related to accumulation of poor attendance points. This was perceived as fundamentally unfair. They also suggested that an amnesty was needed for anyone with more than nine points to reset them back to eight. Thereafter, nine points would demand action that would be applied equally to all. This need for parity and justice was felt strongly by the team without my prompting; employees know when something is just not right. Acting on disparity will build justice in the workplace which will directly impact morale and workplace efficiency. Though discipline may seem harsh to the offenders, it is not considered so by the majority who work hard and do not try to cheat the system. The team suggested the following changes, which were accepted and implemented:

a. Attendance policy widely published and hung in each break room.

b. Discipline for anyone reaching nine attendance points on the day the ninth point was accrued.

c. Attendance points are published so no employee is surprised if they hit a trigger point.

d. The team holds each other accountable.

Temporary Employees

The permanent employees thought that the temporary employees had a much easier attendance policy as they did not get points for lateness. The reality was that if temporary employees were late on three occasions, they would be sent back to the temp agency and would not be allowed back to the Plant; however, the permanent employees were not aware of this process. This was again an issue of communication to dispel a perceived difference. This was probably due to the amount of pent-up frustration that had been present in the workforce over a considerable amount of time. This process allowed release of that frustration and channeled the energy positively for change.

By the end of the project using 20/20 LEADERSHIP as a vehicle for change, the shift supervisor observed that “This change (20/20) is impacting other parts of our business like how we treat temps, our formal training plan and our established staff turnover.”

Inconsistent Time Clocks

The teams also found that an area of improvement for some is not always an improvement for all. For example, unbeknown to the leadership the two, time clocks in the plant that were always five minutes apart. This was corrected by the team. Previously those who wish to ‘play fair’ used the same clock each time. However, those who wanted to buck the system used the clock time difference to come in late and leave early, thus gaining a free hour every week. These few are now complaining that if the traffic on the way to work is bad, they could get a point against them where they did not get that accountability in the past. This overlaps with the organizational PAR team in that all must deal with each other fairly and equally. This also had an impact with the communication team to communicate the policy, so all now know that on-time means just that. Another change the teams made because of the survey is to better communication of the weekend schedule. In the past, individuals did not know until 3pm on a Friday that they are working the weekend. This has now changed to notification by at the latest 3pm on a Wednesday so individuals can inform families and plan their weekends accordingly. This is still not great but is apparently better than anything they have had in the last 10 years, so the employees are happier. My on-going coaching to the leadership team was now to move from the minimum the business can do, to the best the business can do and that we should try to exceed our employee's expectations. This is what we try to do for our customers so why not do the same for our employees.

Giving the team the responsibility to build a fair process brought out some very strong feelings. Organizational justice motivated most; one or two were motivated by getting offenders punished. However, all the individuals on the team wanted to draw a line on the past and obtain the word of leadership that the new system would be managed without favor. Leadership being held to account by employees can be threatening to some leaders. However, giving the employees the 'power' to find solutions and hold the leadership accountable to maintain a fair system was a positive driver for change.

Pay Parity

There were two main issues impacting attendance in relation to pay: paying a living wage (Nadeau and Glasmeier, 2018) and disparity in pay between locations. Paying a living wage rather than minimum wage is a major cultural change in the USA where such conversation is in its infancy. Living wage is a company choice and opportunity as opposed to minimum wage which is legally mandated. Capitalism before doing the 'right' thing. Parity of pay between locations in the same company is within company control. Plants A and B paid different rates and the employees were aware of this difference. A new employee in Plant B starts with the company on $16 per hour, an employee in Plant A turning the paper from Plant B into flat stock starts $11.75 per hour. As Plant A is less than a mile away from Plant B and as employees move between the locations, they know what each earns as an hourly rate.

Lack of Corporate Citizenship

Around 30% of employees are temporary workers. Temporary employees do not stay long enough to become corporate citizens, meaning that employees see constant change of temporary employees as a training burden. Consequently, they resent all temporary workers. It is not the temporary workers' fault that they need training so the employees should consider temporary workers as assets to build the business not a drain on personnel resources. Changing these percentages was outside the span of control of this project but building inclusion over time was not. This inclusion came through acknowledgement of the entire workforce that the right thing was to build the teams together. Because of the PAR team's findings, they saw the need for and established a training manager to ensure the temporary employees were trained and mentored. They also instituted a documented training processes to institutionalize training rather than continue with just verbal training and tribal knowledge.

The majority gratefully accepted these changes. One individual who defaulted on the policy almost immediately, was terminated on the day he gained his ninth point. Leadership followed through which was a positive driver for the hourly employees, that contributed to the measured positive change on the second survey. All now have a common understanding and are held to the same expectation. The PM informed me that. because of this building of common understanding and bringing employees into a discussion to build bridges. attendance across the plant has improved dramatically. The object of this change team was to remove poor attendance as a reason for workers' discontent as measured on the engagement survey. Resolving the problem with a solution aligned with organizational justice had an immediate positive effect as leaders could plan shifts and workers started work on time, man-hours were available to make product which in turn improved production, OEE and profitability.

Baby Boomers and Millennials

The attendance PAR team contained many older members. They felt strongly that millennials entering their workforce have different needs and expectations from the leaders who tend to be the last of the baby boomers (Hamlin and Gellespie, 2011). Baby boomers are focused on a job for life; millennials work to make money so they can enjoy recreation and social time rather than a career. Baby boomers work sixty hours a week out of a sense of duty; millennials are more focused on life experience outside of the factory. The millennials are not wrong, the baby boomers are not wrong, just from a different sub-culture and era. 20/20 LEADERSHIP can build bridges by focusing on people's commonalities rather than their differences. This was a key learning from the very first AR cycle with SCHS.

Millennials need constant affirmation and inclusion (Pickett, 2013) yet the team leaders in the companies studied did not even know the names of their youngest workers. When the millennial says to the older machine operator "I don't need your job," it is not sarcasm it is true. They are more than happy to move job to job as they need happiness and fulfillment more than money. Bolles (1970) suggests that the average millennial will probably have 30 to 40 jobs in their lifetime whereas the baby boomer was always committed to a 'job for life.'. Can 20/20 LEADERSHIP reverse this antagonistic trend between generations to bring about loyalty and longevity? This short study cannot hope to prove this so future research would be needed.

A K-A Reflective Practice.

Baby boomers cannot expect the millennials to just tough it out as they will happily leave. This has been a great opportunity to talk about these real issues and building bridges. As a business we must adapt to meet the needs of the new emerging work force. In 2019, millennials will for the first time be a larger proportion of the work force than the baby boomers Fry (2018). *In terms of 20/20 LEADERSHIP, it is the baby boomers who need to undergo the rapid change to welcome the millennials into the work force for business continuity. We need to create the culture that will encourage the new work force to engage. This is particularly as millennials are not flocking to college and university to study engineering or manufacturing. We need the millennials to stay with us long enough to become productive. We must lead our businesses differently so that millennials learn and stay. Boomers must now reach out to youth.*

National Public Radio (NPR) reported on a study from the management School at the University of Berkley that found that when employers recognized the achievements of their employees, production increased by 23% (NPR, 2019). However, when they showed appreciation for their employees, production improved by 40%. This appreciation is particularly important for millennials. Appreciation is deeply correlated with 20/20 LEADERSHIP as Jews are called to build sacred communities built on a deep appreciation of each other; appreciation is built on a fundamental regard of the individual.

Plant B, Organizational Justice PAR Change Team

In the first survey, the Plant B ‘PAB’ department had a lower score than the ‘Spiral’ department in social justice. The team leader for the social justice team was the Production Manager (PM). The PM thought this result was entirely expected, as these two departments had essentially been two different businesses under separate management until recently. Though under the same roof, they had different rules, organization, and culture. Again, coaching was very hands-on for this first iteration in helping the PM realize that he cannot go into the meeting with assumptions about what the team may want to discuss.

The Plant Manager (PM) reported that issues of disparity, ambiguity, and a historic lack of follow-up on the attendance policy were most to blame as the reason for the low mark in organizational justice. The PM was aware that this was a ‘hot button’ issue for the crews. This included the fact that previous poor attendance by some individuals had been largely ignored to avoid having to punish or lose ‘valuable’ offenders. This double standard had negative effect and particularly on those with 100% attendance. The team worked hard as the two departments, with now one set of leaders as they brought the two department together as one team. Though not completed at the time of writing, they are taking the best processes from each department and designing a single process to be administered by the new leadership. The processes will go some way to increase OEE in PAB to meet Spiral, but the parity will do even more to increase morale over time in the new department. 20/20 LEADERSHIP and social justice is at the center of this organizational development.

A K-A Reflective Practice.+

It was very interesting that the biggest initial issue for the social justice team was the administration of the attendance policy, the category with the worst score on the first perception survey. Issues that impact one category or team ‘bleed’ across to impact others. Elements of poor operational culture to not operate in a vacuum.

Communication PAR Team

When hourly associates made a mistake, they were held accountable, but the hourly employees did not see the same happening to leadership. This was a perception, as in the same way as when hourly associates were held accountable it was done behind closed doors, so it was with leadership. Transparency is essential in authentic leadership, but discipline is not an audience sport. Trust had to be built between senior leaders and hourly staff so that the hourly staff believed that everyone was being treated equally.

Work Orders

The focus team met with plant management to build a new process. The new process they designed has all work orders sent to the plant manager before being released to the manufacturing floor, as the plant manager receives all the customer changes. The plant manager then goes through the change with the crew and each crew member signs for understanding the change to the work order. Assumptions and open loop processes do not grow the business and complete written and follow-up verbal communication and accountability will mitigate the changes and ensure the customer gets what they have ordered. The new process is popular with the crews who "just want to do a good job."

Transparency

Associates were told they had received a larger bonus than the previous month even though they had fewer dollars in their paycheck. This was just down to poor communication and lack of understanding. They did have a larger bonus than the previous month based on production, but they had worked fewer hours due to a reduced order book. The hourly staff felt that leaders were just using mealy-mouthed words, rather than delivering real wage increase. It was unfair to call it a larger bonus with the implication that they had earned more money without the leadership taking the time to explain this simple detail. The hourly staff did not want to be patronized, they just wanted to be dealt with honestly and fairly.

This bonus process was fully explained at the next Town Hall meeting so that all associates understood how bonuses are calculated so they knew and what to expect in their pay. The expectation of the 20/20 LEADERSHIP model that the workforce would be treated with honesty, fairness and respect caused the leadership to be held accountable to the employees.

Poor stacking is giving away product

Some orders did not have a packaging plan and other packing plans were not being followed. Leadership was not communicating to the associates what the associates needed to do to be successful. This was leading to customers not getting what they had ordered. A new process was designed with the crews so that all shifts would have detailed packing plans and that they all understood the importance of following the plan. Every shift now signs off on every order.

This again is illustrative of a plant where inefficient communication and lack of organizational justice had been common. As a practitioner, it was Interesting that both the plant manager and I noticed that the actual words 'organizational justice' became routinely used in the plant, in staff meetings and on the shop floor.

A K-A Reflective Practice.

It was very gratifying that the language 'organizational justice' became a part of routine dialogue during this project. Further research could be undertaken to study the correlation between the adoption of new language and the adoption of the change. Is language change an indicator of cultural change? Does cultural change precede language change or does language change precede cultural change?

In discussing the above changes with the HR manager, she had been surprised that the major area for improving communication was the technical communication of jobs and work orders. However, as the HR manager pointed out, the associates are concerned with "the daily things that impact them" and "once we have fixed these, they will let us know what next to work on." The workforce was quickly becoming part of the decision making and problem-solving process.

A K-A Reflective Practice.

I was interested with how quickly the language I presented as part of this change become the language of the group as they move forward. When an organization's language changes, is this evidence that change is affecting culture at a deeper level?

The Production Manager (PM), as a result of the PAR team's input, identified that they needed to employ a training supervisor to build a documented training process. This is key to organizational justice and dealing with all employees with parity (Principle 1). The PM stated that, "it is not fair to expect people to just know what to do if we don't organize our training." As a result, the Plant Manager obtained extra budget to employ a trainer to design and manage employee training. The PM also stated that, "This new process (20/20 LEADERSHIP) has accelerated change, it is paradigm changing". He became highly energized about the 20/20 LEADERSHIP driven change. I had been coaching and mentoring (Principle 2) the PM for around 8 months and coaching artifacts can be found at Appendix 12. His personal style had been very directive and autocratic, and this had become far more moderate and inclusive. His line manager, the GM, stated that, "There has been a real change in the PM's attitude". Through the 20/20 LEADERSHIP process he redirected his energy and become very animated about the change. He became more approachable and is now able to speak **with** his people rather than **at** his people. My observation is that the PM became more at ease with himself though coaching and as a result has become far more approachable and effective as an 20/20 LEADERSHIP manager.

> *A K-A Reflective Practice. July 2018*
>
> *This is encouraging for me and for the success of this research. The first two months of this practical phase I was discouraged as all the energy for change came from me. Now the energy was becoming shared and in some individuals the change was already being owned. I continued to coach and work with the PM, but I can now see a time where he and his team will be able to take 20/20 LEADERSHIP forward by themselves, in contrast to Plant A. This process of the handover of 'my method' reminds me of something that I heard in a conference some time ago: that control could be hands-on, as knowledge and motivation is given, hands joined as control is shared and hands off as the control is passed on. Operationalization and practice is the vehicle for passing on this ownership.*

3.7.9. Comparison of Plant A and Plant B

Plant B GM's was highly committed to this research from the outset. Plant A also had buy-in at department head and supervisor level but although the GM gave his ascent he did not commit or move to 'own' the outcomes of this research. However, the Plant A GM's line manager, the VP of manufacturing, was very committed and asked for weekly briefings on progress of my research. Change in Plant A was slower with employees reacting more positively to 20/20 LEADERSHIP than the supervisors or managers. In Plant B, the enthusiasm and lead came from the GM after just a few conversations, change was talked about across the plant, and the change leaders were focused on success and communicating the need for change. I spent time coaching the Plant A department manager to generate energy about change, whereas in Plant B change quickly became a natural part of continuous improvement as the leaders and employees were looking for change and wanting to see its effects. Both plants had daily opportunities for improvement using 20/20 LEADERSHIP and both plants made progress. However, Plant B had put far more energy into capitalizing on that progress when compared with Plant A, achieving a 14% increase in OEE in Plant B compared with the 7% increase in Plant A.

A K-A Reflective Practice.

Change must be owned by the Company and teams; this cannot be my change, driven by me and PAR must include client ownership. I always knew that my enthusiasm for change and for success on this project could not be the driving force. It was only when I saw the teams were not capitalizing on success that I learnt that instead of leaning in to force change, I had to lean out but ensure the teams had the tools to drive their own success. If I drive the change, it will be my change program and will not be owned by those who need to take the change forward when I move on.

Some level of resistance to change was natural and expected but was experienced more so at Plant A than Plant B. Resistance to change is no stranger in industry or in biblical Jewish tradition. In the Exodus stories, once the people had their freedom they complained about change and what they used to have in Egypt. “We have no water!” “We have no bread!” “We have no meat!” “Did you bring us into the desert to die!” “Better a slave than to die in the desert!” and “Who made you the leader?” By making the employees the center of change more quickly, Plant B did move through resistance more quickly Plant A.

The Director, General Manager and Plant Manager of Plant B not only continued to encourage me with the project, but also asked for me to design a wider program to impact all future leaders across the 42 plants of the business unit.

A K-A Reflective Practice.

I had to consider if I was creating a dependent culture in Plant A and if it would be better for me to step away as I would not be a permanent feature in their future? It was vital that the Plant A leaders took the lead rather than me. However, I was able to stay with Plant A beyond the time of my in-plant research and there were successes for the people and the processes despite poor senior level buy-in.

At Plant B my intervention was at exactly the time where the organization was looking for a vehicle to take them to the next level. Plant A was not ready for change largely due to the lack of skill set of the leaders and lack of vision that they could change.

Reflection

Even though some individuals understood what we were doing sooner than others, normative change takes time, relationships must be built, trust and new routine must be established, and respect exchanged to sustain the new culture. The PAR teams in Company C did solve real world problems but I would have liked to see another year of monitoring and sustaining the projects as I had previously done in Company B to be content that the organization had sustained cultural change. Five months after the completion of the PAR teams work at Plant A and Plant B, Company C was purchased and the entire OPEX program was cancelled by the new owner and the OPEX staff including myself were all made redundant; thus, I could not carry out the sustaining effort that I would have liked.

A K-A. Reflective Practice.

Business will make its own decisions. Buy-outs and take-overs happen. However, in the new Company C, very little time was spent with the people to engage them with the new company or explain the new culture. This is compounded by the fact that the previous Company C was guilty of this same lack of connection with people, leaving the only culture led organizational development as this research. Thus, I was not able to complete the work as I would have liked, but to paraphrase the story told by Rabbi Sacks, I cannot put every starfish stranded on the beach back into the sea.

3.7.10. Building Trust

Covey (2006) talks about building up the bank balance of trust over time and that trust is the product of competence and character. As relationships grow, a leader begins to understand the competence and character of the team member. However, I believe that trust can be given right from the outset of a relationship. People can feel trusted at a far earlier point in relationships than leaving trust to be a function of time. Company C employees learned to trust me because I explicitly trusted them from day one. Why would I hire an individual without trusting them? If others do break that trust, I necessarily adopt the traditional growth process to rebuild that trust.

Within my work in the Jewish community, trust comes at the first handshake; trust is given as we are all family. This was the same in the RAF where trust was explicit as we wore the same uniform. We trusted each other to watch each other's back in peace and war from the first-hand shake. Why not give that same level of trust when working with civilians? In action learning terms, I have been able to take what the RAF and Judaism have taught me about trust and translate these experiences into my industrial practice using trust as a force multiplier in authentic leadership.

3.7.11. Changes in PAR team members as we moved though the AR cycles

The following comments were collected by me after 20/20 LEADERSHIP operationalization training during micro interviews and at monthly updates where I met with the newly trained leaders for group mentoring and group coaching.

C - "As my mentor teaches me (the researcher) we must engage with active listening. We must take time to stop, look people in the eye and really concentrate on what people have to say. We must respect our people and their time". (Principle 2), (Principle 9), (Principle 10), (Principle 11).

T – A supervisor at the packaging plant with whom I had been working for just 2 months. At my first meeting, Tim was very vocal in stating his views that change programs do not work. They had tried it before, and it always peters out. After coaching, Tim is now a major advocate motivated to use 20/20 LEADERSHIP in change having seen that it is "people that make the difference" in sustaining the gains not process. (Principle 2), (Principle 3), (Principle 12).

T1 – A gluer operator who had been an early adopter asked to come in on a weekend to paint his machine and paint up danger areas on the floor around his machine. (Principle 7), (Principle 11), (Principle 12)

M - A loader operator in the raw material waste-paper yard with whom I took 30 minutes to understand his issues ended the conversation by saying "thank you for being the only person to stop and really listen to what I have to say". (Principle 2), (Principle 3), (Principle 6).

J – A supervisor in the packaging plant who was being dragged down by the self-defeating spiral of depression that comes from not being able to achieve his targets and not having anyone take time to understand the issues came over to me to say, "I am now excited to come to work." (Principle 4), (Principle 11).

W - Packer on the production line was struggling with a 6" conveyor when he actually needed an 18" conveyor. I went over to another machine that was not using their 18" conveyor and brought it to his machine. He had a broad smile on his face and said, "you're a problem solver." (Principle 1), (Principle 2)

T – Plant manager – Tony's method is "paradigm shifting," (Howell, 2018). This was acknowledgement of 20/20 LEADERSHIP as a change model). (Principle 8), (Principle 12).

B - "You are the only one that listens, even if this does not work, thank you for trying." (Principle 2), (Principle 9), (Principle 11).

20/20 LEADERSHIP made an impact on these individuals both when I model it and when the teams engage with it. 20/20 LEADERSHIP through relationship and influence changes perspectives and through leading by 20/20 LEADERSHIP it changes attitudes which has a direct effect on business. Though I could not be with each new leader all the time, some quickly became advocates. As I could not be with them all the time, I had to use electronic media messages such as the example in Appendix 13, to stay engaged. From this practitioner experience, I believe E-mail and social media could be useful tools for remote mentoring and coaching and deserves serious academic research for its use in industrial coaching and mentoring in industry.

3.7.12. Chapter Conclusions.

This chapter details the extensive learning resulting from the major test of 20/20 LEADERSHIP and PAR, which built on the learnings of the preliminary projects. The learning drawn from the implementation of 20/20 in manufacturing will form the foundation of future projects. The perception survey, having been tailored to the individual needs of the businesses, provided a focus on the prime areas for change. Importantly those areas prioritized by the perception survey were not always those that the leadership saw as the main problems. However, focusing on what the teams saw as important not only led to those problems being resolved but also had a direct impact on individual, team and business growth. The teams found that working participatively using 20/20 brought “a paradigm shift” and grew levels of engagement.

Chapter 8. Company C Data Analysis

3.8.1. Quantitative Results of Perception Survey

The main objectives of Chapter 8 are:

1. Undertake quantitative and qualitative analysis of data collected at Company C.
2. Demonstrate a causal link between the application of 20/20 LEADERSHIP using PAR with business improvement and growth in individuals and teams.

The analysis is based on the following datasets.

1. Perception surveys designed and carried out by the researcher at Company C.
2. Analysis of the balancing metric, Overall Equipment Efficiency (OEE) copied from the Company C Monthly report. The purpose of this analysis is to ensure that the application of 20/20 LEADERSHIP has not had a negative impact on OEE.
3. Quality improvement data from Company C derived data.
4. Reflexive Thematic Analysis of the post operationalization training and data collected between surveys 1 and 2.

3.8.2. Perception Survey Results for Plant A

Informed consent was given for all data collection by the Executive Leaders, Plant Managers and all respondents for the three data collection exercises in line with the requirements of Middlesex University in October 2015 when I presented my research proposal to the approval committee. As there was a 100% return there were no sampling issues. All quantitative data sets were subject to the Kolmogorov-Smirnov test for normality. Where data was normal a T-test was carried out to measure statistically significant change. Where data did not show a normal distribution a Mann-Whitney U test was carried out to show statistically significant change. Statistical analysis was complemented by visual graphic analysis when purely statistical methods were insufficient to fully interpret the data. Full statistics on the data collection and the analyzed data can be found at Appendix 11.

Summary of the Plant A Team Building Scores

Though not statistically significant, the first shift data shows that the team's perception of team building had become worse in the second survey compared with the first. The decrease in the first shifts perceptions are explained by a lack of commitment to change by managers. Second and third shift data show improved scores in the team's perception of their team building.

Summary of the Plant A Morale Scores

In the shift data, there is no statistical difference between the shift's perceptions of change in morale either positive or negative at the second survey. The same can be said of the plant level data, although the visual data analysis does suggest a slight increase in morale with more people giving a 4 in the second survey than in the first survey. Importantly, OEE improved over the period of the research. This was not the case in Sirota and Wolfson (1972. pp. 43-48), who found in their investigation that "a large nonunion electronics manufacturing company increased its productivity dramatically,' through introduction of new work processes. However, morale among employees deteriorated seriously," and morale "only improved when the experimental changes were accompanied by changes in managerial assignments." Whereas in Company C using 20/20 LEADERSHIP, leaders changed with the environment changes.

A K-A. Reflective Practice.

Though the three categories for change using 20/20 LEADERSHIP were selected by the area manager, on reflection a measurement of morale over such a short period of time with so much cultural change in progress may have been overly optimistic. However, morale may be a useful balancing metric when next I use the perception survey to measure change. If time had permitted measurement of perceived change in morale may have been more useful over say a year than just 6 months.

Summary of Plant A Leadership Scores.

Speaking with the PAR teams, it was concluded that there was a perceived difference in the quality of leaders which may have been better if leadership had been consistent in application of 20/20 LEADERSHIP change. Consistency with leadership promoting change for the long haul (Principle 4) is essential, particularly whilst in the process of organizational change and, even more importantly. if that change is focused on leadership. When I returned to Plant A half-way through this project after a gap of a month or so, I had to work even harder (Principle 11) to realign Plant A leadership. Supporting this, respondents wrote comments on the second survey sheet without any comments being solicited. The first respondent wrote, “We had a change team, but the meetings just stopped,” and the second respondent wrote “What happened to the change teams?” A third employee wrote on the second survey sheet “A positive change is only going to happen if we all take it serious (*sic*).”

The failure of the Plant A leaders to continue the 20/20 LEADERSHIP change whilst the researcher was away at other sites had a major impact on the PAR teams. An unsustainable consequence was that on my return the teams were looking to me for their lead rather than to their own leadership. To their credit, when I took the survey results back to the leadership to confirm my findings, they acknowledged that the change had been stymied by a lack of continuity in their leadership to continue 20/20 LEADERSHIP and PAR whilst I was away and that they would now re-engage.

A project of note that continued despite the Plant A leadership was the total reorganization of the warehouse using 20/20 LEADERSHIP and PAR that was being led by one of the new leaders trained on the 20/20 operationalization training. This new 20/20 student leader (Ke) had asked me to be his mentor, and I had stayed in contact with him by email whilst I was away.

A K-A Reflective Practice.

One could ask why I retained the Plant A data set in this thesis when the results are far from compelling. However, 20/20 LEADERSHIP is above all an ethical model that I commit to and the leadership of Plant A committed to but they did not sustain the principles. This provides me with a reference point for future action learning cycles that the leadership must be ready for change and that such a radical culture change such as 20/20 LEADERSHIP should not be commenced if the leaders are not ready for change and that there is a reasonable expectation that the change 'leader' will not step aside until local leadership are at least 80% competent with application of the principles.

3.8.3. Perception Survey Results - Plant B.

Unlike Plant A, there was a positive change in the mean in all three category changes though only Attendance showed statistical significance. The Plant Manager stated in the debrief session to the leadership team that using 20/20 LEADERSHIP had been "a paradigm change" for the Plant.

Plant B Communication

The mean score increased due to the move from scores of 1 and 2 in the first survey to 3 and 4 in the second survey. This improvement is a direct function of the work of the communication PAR team who identified deficiencies and built a change team that implemented sustainable results (Principle 8) focused on 20/20. The key area of change was modification of the process for writing and checking the accuracy of work orders, which gave the operators clear instruction for the production order and thus increased output, quality and decreased customer complaints and team frustration.

Plant B - Attendance

A statistically significant change was achieved with the mean improving from 2.57 to 3, as a result of the PAR change teams applying fairness and equity (Principle 6) in the design and execution of the new attendance policy. The attendance team proposed and executed policy changes which demonstrates a high level of participation with decisions made by the team supported by the senior management. Application of the new attendance policy designed by the PAR team saw an immediate improvement with perception of attendance improving between the first and second surveys. The plant manager stated that "this was the single biggest improvement that has had a knock-on effect to improving the business." Not only did attendance actually improve, across the business as indicated by the perception survey data, but the attendance policy change brought tangible and sustainable change.

Resolution of the previously inconsistent application of the attendance policy by the PAR team (Principle 7) removed a barrier (Principle 8) to workplace fairness which was addressed by the application of (Principle 1) and (Principle 6), which correlates with tikkun olam. Parity of treatment of people in the same building separated only by a partition wall was a major driver of previous dissatisfaction. That dissatisfaction was overcome by the work of the attendance change team (Principle 3), (Principle 11). Knowing that all staff would be present when expected enabled the shift supervisor to staff all machines in a planned fashion which enabled the maximization of production (Principle 5). This also impacted team building (Principle 1) by less movement between teams which also improved team efficiency (Principle 7).

Plant B – Organizational Justice.

In the visual analysis, this category shows progress in scores of 2, 3 and a 50% increase in a score of 4. In the first survey, respondents perceived that they were not being treated equally (Principle 6), even though they had not yet been exposed to concepts such as 20/20 and organizational justice. Individuals know intuitively when they are not being treated fairly or with a lack of respect (Principle 9). The Plant manager reflected that ' we can't expect people to do well if we don't properly tarin them." This resulted in hiring a training supervisor. During 20/20 training, the teams were very favorably disposed to the change process to do 'the right thing (Principle 1). Organizational justice (in this research with its roots in tikkun olam) must be modeled (Principle 6) by leadership consistently to nurture (Principle 1) credibility and commitment. In business terms organizational justice increases engagement, which will lead to innovation, creation of corporate citizens (Principle 7) and an increase in the bottom line (Kiersch, 2012).

3.8.4. Comparison of Plant A and B Results

The evidence presented demonstrates merit in the 20/20 model as a tool for organizational development when leaders sustain the 12 principles. Only one of the six categories across the plants showed statistically significant data though all categories showed varying levels of improvement. Significantly, the personal in Plant A were let down by their leadership which is reflected in the survey analysis, whereas the leadership in Plant B stayed committed and achieved a higher level of improvement in plant scores and OEE.

OEE Balancing Metrics

A balancing metric is used to ensure that one metric that is being intentionally impacted, does not negatively impact another metric. In this case, the 20/20 model had to be shown that its application does not negatively impact the balancing metric of Overall Equipment Efficiency (OEE). This metric is prepared and published by the company and independent of this researcher.

The OEE balancing metrics in Plant A and Plant B, Figure 16 and Figure 17, also showed improvement. However, as already stated, in social research claiming that one variable (20/20) is the only cause of a particular effect is highly problematic.

OEE data is independent of the researcher and issued once monthly by the company. Figures 15 and 16, show a Plant A increased OEE from 75% to 82%, and Plant B OEE improved from 64% to 78%. In addition, out of 42 plants in the division, Plant B received an award as the most improved plant over the summer of 2018. Plant B performance may reflect their deeper engagement with this project than Plant A, even when the researcher was not present. In neither plant A nor B did the 20/20 have a negative impact on plant OEE thus the balancing metric proved its worth. Figures 15 and 16 also show the timing of the first and second perception surveys labeled PS1 and PS2.

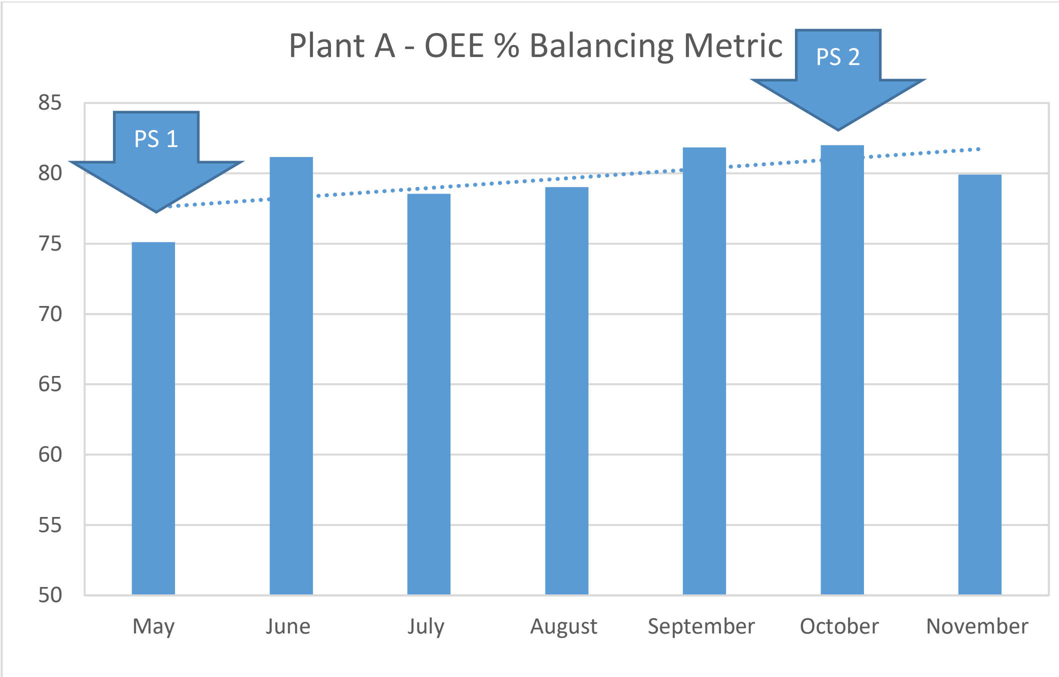


Figure 16. Plant A OEE Balancing Metric[13] (Source Company C Monthly Report)

[13] Plant A has no seasonal variation.

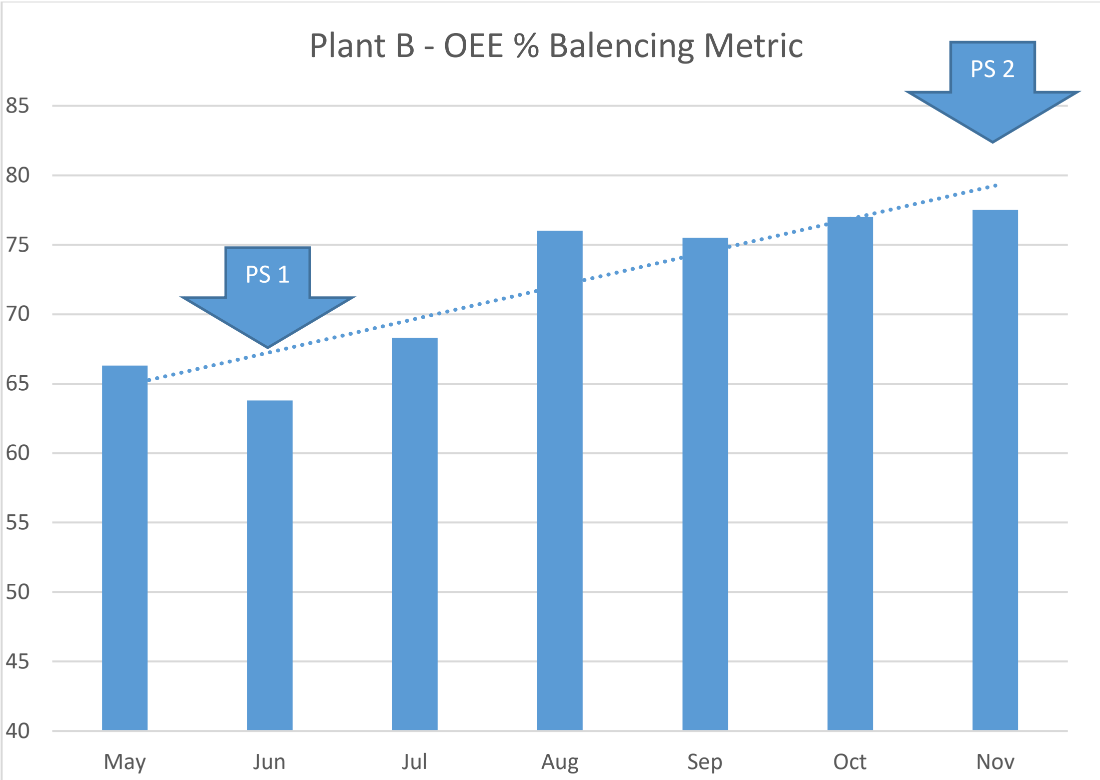


Figure 17. Plant B Balancing Metric[14] (Source Company C Monthly Report)

Quality

Over this period, and not a direct focus of this study, customer complaints at Plant A, as reported by the company statistics reduced by more than 50%. This was of considerable value to the business and confirmed the 40% reduction in customer complaints in the preliminary project in Company B. This was not due to the introduction of new processes, but rather to engagement with those already in place as a result of improved levels of commitment via 20/20 LEADERSHIP and participative working. The leadership and PAR team focusing on people and the processes during the change had a direct impact on the business. This was specifically due to building strong relationships and also commitment to the Visual Management boards,

[14] Plant B has some seasonal variation in February, March and April to manufacture folders in advance of the beginning of the school year in August and September. As can be seen from the graphs these months were not included in the data collection period for this research.

RCPS and wanting to do well. This appears to corroborate the principle that people care about the business when the business cares about the people (Walsh, 2018).

Readiness for Change

Change readiness in an organization is the ability to continuously initiate and respond to opportunities that create business advantage, minimize risk, and sustain performance (Musselwhite & Plouffe, 2010). Change must be a constant in business just "to get things done" (McWhinney, 1996). This requires continuous focus of an engaged and coordinated work force. The need for this organic, constant approach to change means that organizations need a new kind of leadership capacity to reframe, reinterpret and reform operations, and to do so continuously (McGuire and Palus, 2018). This means that to maximize a change opportunity, the organization must be in a place where the team is ready to accept change as normal operation to become a learning organization (Senge, 1990).

I had been in post at Company B for about 6 months before I took on the responsibility of the quality department and started 20/20 change, by which time most people already knew me and my methods, which was preparation for the change to be sustained. However, in Company C, I had to initiate change as soon as I arrived. They were not ready for change or ready to sustain the change by themselves and each element of change was a new barrier to cross and sustaining change for them was difficult when I was not on site due to my responsibilities at other plants across North America. Future research could be carried out on the applicability to coaching manufacturing supervisors and operators via the web in a manufacturing environment to ascertain utility in sustaining change. It is important here to bear in mind this would also have a financial cost as coaching would have to be carried off-line and extra staff would have to be brought in to run machines. Another opportunity for future research would be to balance remote coaching cost measured against the improvement to the bottom line and if this could be isolated for accurate measurement.

In the case of Company C, Plant A, circumstances did not allow the organization time to prepare for change, but when on opportunity for business improvement arises, senior leadership rarely say anything other than "forge ahead." When I made the Plant A GM aware that I was looking for a practical project for this DBA, he saw an organizational gap where I could help and irrespective of readiness encouraged that I begin the project and drive change. I was grateful for the opportunity. That there was generally a positive improvement in all three categories is indicative that the model has merit. However, how more effective would it have been if the organization had had a year to become stable with basic leadership before the introduction of PAR and 20/20, as a vehicle for significant change.

3.8.5. Semantic Reflexive Thematic Analysis of Post Operationalization Training and New Leader Practice Using 20/20 LEADERSHIP

I designed the operationalization training course that took elements from my military leadership training and practitioner experience, including the basics of manufacturing supervision, authentic leadership and the principles of 20/20 LEADERSHIP. The training was practice-based whenever possible, as the majority of the respondents were not university or college trained and were not predisposed to spending large periods of time sat in a classroom. Plant A training took place in one extended session of 2½ days and Plant B training took place in 4-hour sessions once per month over four months during the research. In Plant B, this necessitated me exposing the new leaders to 20/20 LEADERSHIP first and then developing the other leadership themes, whereas in Plant A, I was able to build up to 20/20 LEADERSHIP over the 2 ½ days. This difference was the result of having to fit in with business needs and constraints. At both plants, 20/20 LEADERSHIP was in practice from the outset of the research and informed leadership practice particularly during the twice a shift GEMBA, as well as leadership interactions, and problem-solving sessions.

A K-A Reflective Practice:

Two reflections come to mind in setting up and developing the training. Firstly, that I had had the opportunity to get to build relationships with the majority of the individuals who would attend the training and so was able to consciously design the course to meet their needs as well as the needs of the business and lastly the needs of the research. Building relationships (Principle 2) would be key to the training to impact these individuals at their point of need, to be able to nurture collaborative and then truly participatory teams (Principle 1) and (Principle 7). I needed to model 20/20 LEADERSHIP so the students could be influenced by 20/20 LEADERSHIP in action.

Secondly, that the need to modify the training to meet real-world constraints of availability and time became the tenor of the research that followed. This modification based on real world need foreshadowed other modification such as that of the PAR process and how the research was carried out with the looming threat of the Company being bought out and perhaps before the research was completed.

The 20/20 LEADERSHIP training was carried out as part of my normal role as an internal consultant approved by my VP and fully discussed with the GMs in both plants. At the end of the training each new leader was asked to complete a post-training evaluation. These new leaders are now referred to as the respondents to the evaluation data collection which is the data set for the forthcoming Reflexive Thematic Analysis. The respondents were informed that their responses to the post-training evaluation would be used for two purposes: primarily, as an out-brief tool for the GMs to debrief them on student progress on the 20/20 LEADERSHIP training; and secondly, as data for my PAR project using 20/20 LEADERSHIP.

Method

The post-training evaluation data was collected from 31 respondents: 16 from Plant A and 15 from Plant B. This was 100% of the those who had attended the training course and then practiced 20/20 LEADERSHIP.

There were 16 Plant A respondents who had worked for the company for 1 to 30 years. One supervisor had been a shift supervisor for 10 years and one had been a shift supervisor for 5 years before being recently promoted to the manufacturing supervisor. The remainder had been in supervisor roles for less than 1 year or were yet to move from being a machine operator to shift supervisor. None of these respondents were college or university graduates and none had had any previous leadership training. There was just one female student.

There were 15 Plant B respondents who had been with the company from 23 years to less than one month. Two of these had been in supervisor roles for more than 5 years but like all but one of their co-workers had received no formal leadership training. Several of the respondents were from South America and Africa and had various levels of fluency in English. This made me even more conscious of breaking down some of the complex elements of 20/20 LEADERSHIP into basic English and to teach these principles in practical exercises wherever possible. One of the respondents was the Production Manager who had been with the Company for 2 years but had only been at Plant B for 6 months. He was a university-educated 25-year-old graduate in paper science but had received no formal leadership training. The other 14 respondents in Plant B reported directly to him. There were no female respondents in Plant B.

Several questions were asked on the post-training evaluation. With one exception, all of the research questions were about the mechanics of the training. The research question asked, “What two things have you learned during this training that you will take forward into your leadership practice?” All respondents provided at least one answer which they wrote on a proforma. Answers were recorded against their names for the GM debrief but were made anonymous for the purpose of my research. I reinforced that they did not need worry about correct spellings and grammar and could ask for help if it was needed.

3.8.6. Semantic Reflective Thematic Analysis

Semantic RTA was used inductively in this final qualitative analysis to illicit themes that came from the respondents as those that would confirm the research that 20/20 LEADERSHIP had and would continue to impact their practice. In RTA is important to state any assumptions. Firstly, the 20/20 LEADERSHIP principles are the 'pre-codes' for this analysis. In testing the 20/20 LEADERSHIP model, there is an assumption that training and practice will improve the leadership efficacy of the new leaders, and as a result improve the business OEE. Therefore, the purpose of this RTA is not to design new themes but to confirm the 20/20 LEADERSHIP principles derived from the first RTA are utilised and confirmed by practice, and I will be looking for the data to confirm the already stated principles. If any new themes are discovered in the data, then thought must be given to modification of the 20/20 LEADERSHIP principles as already stated. Two new Themes were added to the model at this point (Principle 11) and (Principle 12) and a modification was made to (Principle 2).

> ***Principle 2: Effective Communication is essential at every interaction with line management, peers, and team members****, and each of these interactions are opportunities for growth of all parties through relationship building, mentoring, and coaching.*

> ***Principle 11. Leaders willingly give extra effort when needed, for the benefit of the individual, the team, and the business.***

> If a leader wants to excel, it takes consistent extra effort. This extra effort pays off in building relationships with the team, that build efficiency which is key to operational excellence. The extra effort may go unrewarded by the business, but this is not the point. The point is building leader and team competence without even the need for recognition.

Principle 12. Leaders must find their own motivation to lead.

This means personal choice. Motivation to lead using 20/20 LEADERSHIP must be a core choice of the individual. If a leader is self-motivated to follow a high achieving model such as 20/20 LEADERSHIP they will be able to reproduce or exceed the results in this research.

Results

The results of the RTA reflected that all 12 principles of 20/20 LEADERSHIP had impacted the 31 respondents and also raised new themes, namely responsibility for leadership, accountability for decision making, effectiveness of communications, the confidence that 20/20 LEADERSHIP brings to new leaders, the effectiveness of delegation and willingness to change. None of these new themes are unique to 20/20 LEADERSHIP and they should all be core to any model of leadership. However, the incidence of comments about communication is worthy of further consideration which achieved data saturation early in the analysis. An example of this was a comment from a Plant A supervisor who said:

"As my mentor teaches me [i.e., the researcher] we must engage with active listening. We must take time to stop, look people in the eye and really concentrate on what people have to say. We must respect our people and their time".

As this theme was developing, I was struck by how often effective communication was seen as a pre-requisite for developing relationships, which is a key theme of 20/20 LEADERSHIP Principle 2. One machine operator noted "You are the only one that listens, even if this does not work, thank you for trying."

Thus, as a result of the RTA, the importance of communication will be included in an amended 20/20 LEADERSHIP Principle 2. The amended Principle 2 now reads:

Principle 2. Effective Communication is essential at every interaction with line management, peers, and team members, and each of these interactions are opportunities for growth of all parties through relationship building, mentoring, and coaching.

As a further analysis of the RTA respondent data, the themes were then ranked by the number of times they occurred to ascertain what further meaning could be extracted from the data, Table 6.

Principle Number	No of Respondents Making this a Key Response	Ranking
Principle 1	9	2nd
Principle 2	17	1st
Principle 3	8	3rd
Principle 4	6	4th
Principle 5	3	6th
Principle 6	1	7th joint
Principle 7	4	5th joint
Principle 8	4	5th joint
Principle 9	6	4th joint
Principle 10	4	5th joint
Principle 11	8	3rd joint
Principle 12	1	7th joint

Table 6. Rankings of 20/20 LEADERSHIP Principles Quoted in Respondents Comments

From the replies of the 31 respondents, data saturation of several of the themes was achieved early in analysis, Principles 1, 2, 3 and 11, achieving the highest occurrence and thus rankings at the top of Table 6. This was particularly gratifying as Principles 1, 2 and 3 are the Jewish core to 20/20 LEADERSHIP, i.e., tikkun olam – social justice, chesed – acts of loving kindness and tzdacha - righteousness. These particularly build relationships which featured heavily in the respondents' comments which again is the core to 20/20 LEADERSHIP and were seen by the respondents as those that made the largest impression during training and would impact their future leadership practice. In equal 3rd place was Principle 11, that recognised that operating as this level of leadership requires extra effort from the leader for the benefit of the team members and the business. Leaders must understand that extra effort before committing to follow 20/20 LEADERSHIP.

The second group in the respondents' ranking consists of Principles 4, 7, 8, 9 and 10. These acknowledge that leadership is a process that over time builds collaborative teams working toward a mutually understood mission or vision using humility and respect that comes through reflection and self-awareness to improve the individuals and the business.

The final group that emerged from the respondent's comments consisted of Principles 5, 6 and 12. These had the least initial impact on the respondents, but this does not take away from the validity of these principles. Why might they have had the least impact? During training and practice in Plant B, there was significant emphasis on standards and accountability particularly on performance management and the twice a shift GEMBA, which is the core of Principle 5. Fairness (Principle 6) is reflected in organizational justice as in Principle 1. Principle 12, is probably the most difficult for a leader to engender in others as motivation to lead is a very individual choice. Lastly, the lower number of individuals ranking this final group may have just been as a result of only asking for the top two elements of 20/20 LEADERSHIP. However, that all 12 principles received a ranking provides a positive indication that 20/20 LEADERSHIP has impacted the respondents and if they continue to practice 20/20 LEADERSHIP it will continue to impact the business. Gratifyingly, these results bring this research full circle from a desire to build a leadership model based in Judaism, to demonstrating its impact in manufacturing on the leaders who utilize 20/20 LEADERSHIP.

3.8.7. Latent Reflexive Thematic Analysis of New Leader Practice in the Period between the First and the Second Perception Surveys

The data in Appendix 20 were collected during the period between the first and second quantitative survey. This data, as with all other data in this research was also required by Plant Leadership to debrief the value of using 20/20 LEADERSHIP, and the operationalization training. Informed consent was obtained orally when data was collected at group debriefing sessions, change meetings and one-to-one coaching. These comments were subject to a third RTA to analyze the utility of the 20/20 LEADERSHIP model. This latent RTA provided further qualitative analysis to add to the mixed methods triangulation of the effectiveness of 20/20 LEADERSHIP as a leadership model, and as an agent for organizational and personal change.

Three themes emerged as in Figure 18: awareness, community, and journey. The first theme was the increase in the level of awareness of the respondents to the needs of the individuals, the teams for which they were responsible and to the needs of the business. This new level of awareness is directly correlated to the principles of 20/20 LEADERSHIP and particularly (Principle 1), (Principle 2) and (Principle 3) that are the core of this model derived from the Jewish mitzvot of tikkun olam (social justice), tzdacha (righteousness and charity) and chesed (acts of loving kindness). This awareness of others through developing a reflective practice (Principle 10) prompted the respondents to care about the individuals and teams. This deeper caring developed deeper levels of innovation and creativity (Principle 8) to drive change forward for the benefit of the business creating engaged corporate citizens (followership) who in turn generated and pursued their own change projects. This awareness developed through relationship, and daily coaching recognized the importance of meeting the individuals and teams at their points of need (Principle 9) and seeking to find solutions without creating dependency. The respondents' energy levels were raised during this inter-survey period as they became catalysts for change.

The second theme was deeper levels of communication aligned with (Principle 2): using deeper levels of communication and taking time to listen and to explain the why of decision making. Communicating results also had an impact on those not directly in the change categories as for example when the entire attendance of the plant improved as a result of the work of the attendance team change group. This deeper level of communication included programming time to talk and explain the why of a particular decision as well as taking time to really listen to what people had to say.

The third theme recognized that leadership is a journey (Principle 4) that needs to be sustained through fairness and letting individuals try new ideas, and that when teams succeed on that journey morale and output is improved. Through this journey the respondents were aware that they were taking ownership of work issues and that they could solve problems that would improve business (Principle 5). They also became aware of the strengths and weaknesses of the teams and instigated a skills review to understand what training was now needed. Further to this, they recognized that they need a training supervisor. The shift supervisor took responsibility for this at Plant A, and at Plant B the GM and Plant manager found budget money to hire a training manager to conduct a skills gap analysis and set up the required training program.

Lastly, this RTA showed how the individual principles do not operate singularly; the package of principles operates inter-dependently. This can be seen in how the three themes interlink in Figure 18.

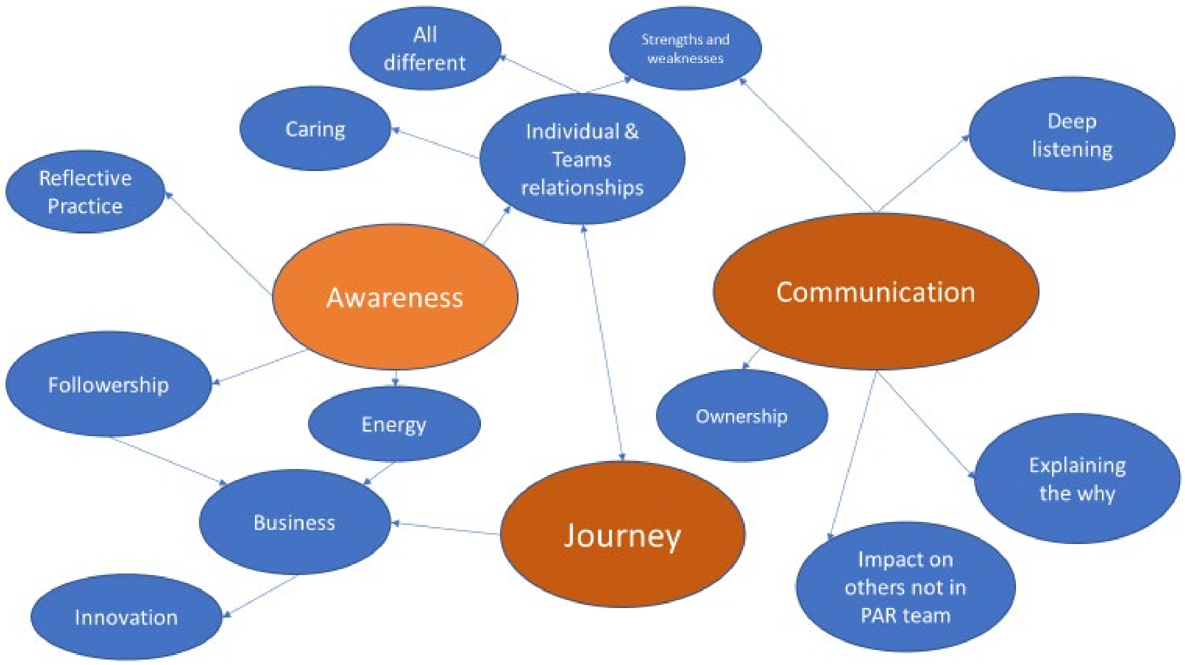


Figure 18. Thematic Map of Data Collected in the Period Between the Surveys

3.8.8. Chapter Conclusions

The quantitative data collected in the second perception survey was inconclusive of change in Plant A and did not reproduce the positive changes reported in the qualitative RTA. It may be considered that this quantitative data could have been omitted from this thesis. However, 20/20 LEADERSHIP is an ethical model and I believe it is the 'right thing to do' to report both the good and the bad project outcomes, particularly when lessons can be learned even when the research did not go to plan. Plant B showed quantitatively that there was improvement which was reproduced in the qualitative data as a result of the impact of 20/20 LEADERSHIP and its use in building a highly engaged workforce using PAR.

PART 4. Final Results

Chapter 9.

The main objectives of Chapter 9 are:

1. Report on the concurrent triangulation of the quantitative and qualitative data to ascertain if 20/20 LEADERSHIP and PAR provided for business improvement.
2. Model execution and modification.
3. Measuring the success of this research.
4. Distinctiveness of PAR when used in manufacturing and the need to design a new model for effective PAR research in manufacturing.

4.9.1. Outcomes of this Research

Impact of 20/20 LEADERSHIP and the PAR Teams on Seniors, Peers and Subordinates

The impact of the model on different levels of the business and over different periods of time are important for reflection in action but also reflection on action upon which to build succeeding AR cycles. These reflections on using 20/20 LEADERSHIP with seniors, peers, and subordinates are recorded below. These reflections are recorded on Table 7.

	Seniors	Peers	Subordinates
Immediate	Largely positive due to quick results – then a tendency to ask me to slow down so the rest of the organization can catch up.	Distrust – due to subordinates gravitating to my person-focused style – "is he trying to take my job?"	Hungry for someone to listen and care. Desperate for authentic leadership. Almost too easy to make followers.
Mid-term	Want everyone to be trained in the TO methods but they do	Once they see I am in it for the team, they are enthusiastic and open for me	Stay connected as friends as well as coworkers that benefit from the results.

	not want to commit the amount of time that is needed for a major cultural change. 20/20 LEADERSHIP cannot be taught in an hour or so or over a 'lunch and learn'?	to work with more of their people. The barrier is peers seeing that 20/20 LEADERSHIP is not about me, but is rooted in a genuine desire to make the workplace better for everyone and to improve business.	When results are not as we wanted or expected people still stay connected because they say, "at least you tried." The workforce seems desperate for someone to care about them as individuals and to have someone truly listen to what that have to say. Even when outcomes are not what we expected their continued engagement
			Gives me a second or third opportunity to re-engage.
			Subordinates quickly become friends as they see that I put people first.
			20/20 LEADERSHIP can cause a difficulty in subordinates minds of other departments with who to follow.
			Can result in their boss losing credibility.
Long Term	Opportunity for future research.	Opportunity for future research.	Opportunity for future research.

Table 7. Impact of 20/20 LEADERSHIP and the PAR Teams on Seniors, Peers and Subordinates

Facilitation

The AR facilitator must have personal discipline and good self-organizational skills to be able to influence and model behaviors (Fisher and Sharp, 2004). McArdle (2008 pp. 650-653) defines facilitation as the external consultant as 'initiator and methodology expert'. As a result of this research, I have developed McArdle's limited definition for use of the internal company PAR consultant to the following: *The role of the internal company PAR consultant is as a mentor and coach who is personally invested through a journey of emancipatory PAR to deliver the business need given by line-management via emancipatory teamwork*.

Coghlan and Brannick (2013 p.42) state that "nothing can be measured without changing it." Whereas this may not be strictly true even in a social context, the act of measurement did cause an expectation for change in Company B and Company C. The perception survey caused questions to be asked about its purpose in Plant A, which in turn caused individuals to change how they interacted with others before the survey was collated and the change project commenced. The way in which the hourly staff related to their leaders as a result of the survey set an expectation about change even before change started or the survey results had been collected or analysed. Expectation for change was initiated just by talking about the survey with 'insiders' of the community.

> *A K-A Reflective Practice:*
>
> *I was external to the plants as a member of corporate staff but still internal as a company employee with some authority over the local leadership though I chose to mentor and coach rather than 'tell' using command and control. However, it would be naive to believe that local staff did not react to me and this research at least in part due to my company position particularly until we had built trusting relationships. This goes back to authority and influence discussed in paragraph 1.2.3.*

In this research, I did not have the opportunity of a dialogical activity to construct the projects. In three cases, there was a pressing 'business need' delegated to me by line management which I was expected to solve with sometimes as little as twenty-four hours to make a start. In the fourth case, to build a new Hebrew school, I accepted the responsibility for solving this twenty-year-old problem in a community meeting. These are examples of the action researcher in their own organization having to submit to command and control before being able to be emancipatory throughout the remainder of the action research cycle. However, having been given the problem to solve, it was up to me how I chose to solve the problem and my decision on how to effect change was using participatory action research with the change agents in their own environments.

GEMBA

The GEMBA walk carried out twice per shift was a major interaction (Principle 2) with the teams. These interactions were invaluable for building relationships (Principle 2), making team members business enablers (Principle 3) and building trust (Principle 7) with the team. Through that trust, mentoring and coaching (Principle 2), the level of collaboration and participations deepened.

The twice daily GEMBA was an opportunity to get to know the teams, their individual strengths and characters, and to really listen to what they had to say whilst consciously treating them with respect and kindness, (Principle 9), (Principle 1), (Principle 3).

Concurrent Triangulation - Mixed Methods Analysis and PAR

The data sources collected in parallel in formally testing this research were the quantitative perception survey the qualitative semantic RTA post operationalization training comments from the new leader's latent RTA inter-perception survey comments. These were then triangulated with the OEE balancing metric and customer quality improvement figures which were company metrics collected outside of the influence of the researcher. Throughout this triangulation as discussed by Creswell (2009) I was looking for convergence, that is, are the data providing confirmation of the same effect. Though this is a somewhat traditional method of mixed method approach it did save time compared with separate activities carried out serially as acknowledged by Creswell and Clark (2007) in Creswell (2009); time that was not going to be available in this real-world change project.

The concurrent triangulation brought the best of mixed-method analysis with each method benefiting from the weakness in the other i.e. the quantitative data stood outside of feelings and emotions and the qualitative data brought understanding of how the employees felt about the change, what they had learned, how they had learned and how they had changed their practice as a results of learning using the 20/20 LEADERSHIP principles in an environment of PAR.

Quantitative data for Plant A showed improvement in statistical mode change and visual graphic analysis, however lack of commitment from leaders in Plant A severely impacted the scores, which highlighted the consistency of commitment that is need by leadership and is central to 20/20 LEADERSHIP. Company B scores were more favorable and included statistical significance Qualitative data (RTA) has been used to construct the 20/20 LEADERSHIP model and then confirmed its utility for individuals, teams, and business.

Finally, the quantitative data provided by the company confirmed improvement to the business in OEE with an increase of 7% in Plant A and 14% in Plant B. Customer complaints were reduced in the preliminary project in Company B by 40% and by 50% in Company C. This confirmation from independently gathered data is particularly gratifying and also of major value to the business, saving over $400K in Company B in one year.

In terms of Participatory Action Research, the question raised is whether this new knowledge was discovered in a participatory manner and whether the application of that new knowledge led to action in the businesses reported in this thesis? This thesis showed how the 20/20 model was not only derived participatively but trialed in preliminary participatory projects and actioned in a PAR real-world manufacturing setting aimed at delivering individual, team and business success. Thus, mindful of the limitations previously discussed, this thesis does show that modified PAR was successful deployed with 20/20 Leadership in this research.

Model Construction, Execution and Modification

Through semantic RTA, the 20/20 LEADERSHIP model was constructed inductively. Semantic RTA of the twelve principles of the model reflected their Jewish roots particularly tikkun olam, tzdacha and chesed. The principles were adopted by the new leader students and with mentoring and coaching became part of normalized practice in all but one case that is developed in Appendix 18.

After training and operationalization, the model was exercised over a six-month period and the students were asked for their comments on how 20/20 LEADERSHIP had impacted their leadership practice. Those comments when subject to a second semantic RTA showed that all principles of 20/20 LEADERSHIP were now being practiced, and that practice impacted business as measured in the quantitative perception survey. A third RTA (latent) added to the understanding of how the model had impacted the teams and provide further understanding to the researcher, particularly the degree of awareness in the respondents of the needs of individuals, teams and the business. This was particularly in the need for robust communication that was given priority for deep listening and to explain the 'why' behind decision making which resulted in modification of the model.

Plants and shifts adapted to 20/20 LEADERSHIP at different rates based on their history, culture, previous training, and experience. Of note is the importance for a team's readiness for change. For future 20/20 LEADERSHIP inceptions and if business permits, **which will often be the driver,** I will want to prepare the teams for change before beginning that change. This preparation will build team resilience prior to introducing change. If leadership and teams are better prepared, they will not need reliance on the researcher for sustainment, though mentoring and coaching will remain essential though the change process until the teams are self-proficient.

The testing of the model, both quantitative and qualitative, demonstrated through both of the preliminary projects and also the formal project that 20/20 LEADERSHIP has merit and reproducibility in terms of both organizational development and operational excellence. This merit was without impacting balancing metrics when initiated with training, and nurtured with mentoring, and coaching. This research showed that the traditional four step PAR model though applicable to stable environments for research was not suited to PAR in manufacturing. To ameliorate this deficiency, I designed a new 7 step model for PAR in manufacturing. This new model combined the best traditions of PAR with an added step to provide a culture of continuous change to meet the needs of business. 20/20 LEADERSHIP with this PAR model provided a joint vehicle for organizational change to drive business toward operational excellence whilst remaining true to its Jewish origins. With no other programs put in place during the time of the project, the 20/20 LEADERSHIP model was the major driving force for change. However, as already stated, in social research claiming that one variable is the direct cause of an effect is highly problematic. However, the evidence presented does show merit in the 20/20 LEADERSHIP model as a tool of organizational development. Furthermore, the participation in business provided through PAR was shown to be a useful vehicle for organizational development.

20/20 LEADERSHIP and the new model of PAR are now commended to manufacturing and other leaders for further testing and reproducibility testing.

4.9.2. Demonstrated Utility of the 20/20 LEADERSHIP Model

The RTAs demonstrated that all 12 principles were shown to have impacted the respondents from the data collected from those respondents at both plants. The comments collected from the respondents underpinned the organizational development that spanned the time between the first and the second perception survey. Below is a summary by principles of how the model operated in practice. Principle 2, 11 and 12 are amended as a result of the Company C projects. **The text in bold below reflects modifications to the original ten 20/20 LEADERSHIP principles. These modifications are due to the new data collected for the RTA carried out after operationalization training and the RTA of data collected between the first and second perception surveys on the practical execution of 20/20 Leadership .**

1. *Leaders consistently nurture teams with truth and organizational justice.*
2. ***Effective Communication is essential at every interaction with line management, peers, and team members**, and each of these interactions are opportunities for growth of all parties through relationship building, mentoring, and coaching.*[15]
3. *By treating individuals with kindness, these individuals become business enablers.*

These three principals were seen to be usually practiced together and with the largest frequency of all 12 principles. This is gratifying as these 3 principles are the heart of 20/20 LEADERSHIP and its Jewish antecedents. A key example of this is in the radical change of Kay (Appendix 18). Kay achieved major change through nurture, relationship, coaching and kindness which saw her transform from being a problem employee on the verge of being fired, to becoming an advocate of 20/20 LEADERSHIP who then became employee on the month. Other examples can be seen for Principle 1 on pages 33, 40 and 58, Principle 2 on pages 36 and 108 and Principle 3 on pages 71 and 154.

4. *Leadership is for the long haul.*

Leaders must commit to their people and not expect instant change particularly if change is to be sustained. This is particularly difficult in the light of changes in management and business ownership. Examples of Principle 4 can be found on pages 108, 132, and 152.

[15] Updated as a result of the second RTA.

5. Leaders set performance and moral and ethical standards and hold themselves and their followers accountable.

20/20 LEADERSHIP cannot be considered a soft option just because its focus is people rather than profits. 20/20 LEADERSHIP is a business model and standards of performance as well as ethics and morality must be set, and everyone in the business must be held accountable. Examples of Principle 4 can be seen on pages 139, 151 and 240.

6. Leaders model and influence authenticity, fairness, honesty, and integrity.

Leaders must be an example, be authentic, fair and honest if they want to build people, teams and the business. Maintaining integrity is key to authenticity as individuals will only develop trust with leaders who lead with truth. Examples of Principle 6 can be seen on pages 34, 138 and 140.

7. Leaders build collaborative then participatory teams. This leads to followership and corporate citizenship that brings sustained gains for individuals and business.

Collaboration is just the first step in working together as a low-level participative methodology. Real growth is achieved in teams who are truly participative making business impacting decisions that impact lives and business. Through genuine participation individuals become highly engaged corporate citizens generating followership and sustaining business. Examples of Principle 7 in action can be seen on pages 138, 140 and 222.

8. *Leaders are pragmatic share vison and remove barriers to achieve goals.*

Teams need to be led with vision, but that vision is not solely the remit of ‘the’ leader. Teams that build a vison together are more committed to achieve that vison. In bringing the team together to build a joint vision, all voices are valid and indeed new ideas and perspectives will be brought that would not come from ‘the’ leader alone. When the team has the vision and energy to pursue success the role of the leader becomes one of removing barriers to build success for the team and the business. The business success become prominent rather than just the leader's career and ego. Examples of Principle 8 in action can be found on pages 33, 40 and 221.

9. Leaders demonstrate humility and respect.

Leaders should be open and humble enough to learn from their subordinates and incorporate their subordinate's ideas into their own growth and that of the business. Respecting one's subordinates by their inclusion in the team vision and decision-making nurtures the team through collaboration to true collective participatory action. Leaders will often not understand the technical nature of each team members job so having the humility to ask for their input will nurture the growth of the individual and the business. Having the whole team at the core of change, demonstrates humility to and respect for the team and benefits the wider business. Examples of Principle 9 in action can be seen on pages 108, 152 and 221.

10. Leaders practice self-awareness through reflective practice.

Self-awareness and reflective practice elevate the ordinary to the extra-ordinary. Without self-awareness, one does not know what or how to improve. We owe teams 20/20 LEADERSHIP leaders who take the time to be reflective so those individuals can grow for the benefit of the teams and the businesses. Reflective practice must be ongoing to build leaders who are aware, and inward looking for the benefit of outward looking change. Examples for Principle 10 in action can be found at pages 69, 151, and 287.

11. Leaders willingly give extra effort when needed, for the benefit of the individual, the team, and the business.

If a leader wants to excel, it takes consistent extra effort. This extra effort pays off in building relationships with the team, that build efficiency which is key to operational excellence. The extra effort may go unrewarded by the business, but this is not the point. The point is building leader and team competence without even the need for recognition. Examples of Principle 11 can be found at 71, 132 and 139.

12. Leaders must find their own motivation to lead.

This means personal choice. Motivation to lead using 20/20 LEADERSHIP must be a core choice of the individual. If a leader is self-motivated to follow a high achieving model such as 20/20 LEADERSHIP, they will be able to reproduce or exceed the results in this research. Examples of Principle 12 in action can be found at pages 33, 108, 133.

4.9.3. Measuring the Success of Research

Strauss and Corbin (1998) suggest the following points in italics against which one can measure the success of qualitative research. Following these points are my findings, observations, and reflections.

1. *Steer researchers thinking away from the confines of both technical literature and personal experience.*

1a.This project is based on a 3500-year-old tradition that is reinterpreted in every generation. Thus, what may even seem to be immutable is constantly challenged and made relevant for each new generation. This demands that both the Torah text and personal experience be challenged and that new Torah (literally “teaching", "doctrine", or "instruction") be developed. Thus, new ways of interpretation or thinking demanded by my tradition are not only useful but required. The idea of tikkun olam – repairing an unfinished world or broken world - can be reinterpreted as social and organizational justice, enabling leaders and followers to work from a core motivation building bridges between current state and future state.

As the embedded researcher, it would have been easy to steer the PAR in the way I would prefer for it to go, even unconsciously. When this did begin to happen, such as when presenting the graphed results of the perception survey in Plant B, I found that the group would quickly see though this. For example, when looking at the perception survey, it was easy for me to see patterns of positive change, which I could strongly argue, but those to whom I was presenting the project results saw different patterns that revealed my bias. Bringing the data back to the group held me to account and stopped my bias from misconstruing the data and forced me to avoid my interpretation of the data being the only voice that was recorded. This stopped the research being my single truth, rather it benefited from the various truths that came from individual team members’ interpretation of the data based on their lived experience.

2. *Avoid standard ways of thinking about a phenomenon.*

2a. Viewing organizational change in industry through the lens of Judaism is certainly not a standard way of looking at the phenomena of industrial leadership. Also, simple changes in how one frames questions proved to reap new lines of thinking. For example, being challenged in a coaching session with "How does that make you think about …….," rather than "how does that make you feel about …." had a much larger impact on the coachee.

3. *Stimulate the inductive process.*

3a.The main difference between inductive and deductive approaches to research is that deductive approaches test theory, and inductive approaches generate new theory emerging from the collected data (Gabriel, 2013). In this study, an inductive approach used the cultural perception survey to explore the new phenomena of 20/20 LEADERSHIP. This caused the leadership and followership to look at leadership and teamwork from the ground up rather than from leadership perspective down.

4. *Focus on what is in the data and do not take anything for granted.*

4a.As the embedded researcher, I had to be consistently aware of the data and not my own reporting bias. However, the strength of PAR is that the researcher does not exist in isolation and that the group I was working with would consistently bring me back to what they saw and interpreted from the data which helped to avoid my personal bias directing next steps. However, they tended to interpret the data from the past and I as a platform for the future. Both are valid. Knowledge is often thought of as truth (Nakkeeran, 2010). Accordingly, if something must be considered knowledge then it must be true. Only if it is true does it qualify as a form of knowledge otherwise it is not considered part of knowledge. According to post-modernists, what counts as knowledge and truth is always relative to a culture or historical period. This holds not only for moral and aesthetic judgments, but also for the claims to truth made by natural and social science. So, science does not offer a method for arriving at universal truths that transcend time and place; rather, it represents one way of knowing, that reflects certain values, beliefs, and interests of modern, western society (Gorton, 2018). In this research the data showed improvement in the business and OEE, and in sharing the data back with the workforce, nothing could be taken for granted.

5. *Allow for clarification or debunking of the assumptions made by those being studied.*

5a. Respondents did not always agree with the data that they had contributed to as not all of them 'felt' the change from their lived experience. However, through coaching they were eventually able to step back to a more neutral position and from there they would often be surprised that the broader perspective enabled them to see a different 'picture'. A common criticism of coaching in business is that it is about changing behaviors through feelings. I found that it was not feelings but changing how individuals thought about situations that was more impactful. That an external force was making them think in a new way without their conscious input was more invasive than an external force impacting how they feel. Not only did they think about the data differently, but they were more resolved to change, particularly when this was explained though the secularized model in terms of bridge-building, 20/20 LEADERSHIP and organizational justice.

6. *Listen to what people are saying and doing.*

6a. This was particularly exploited in the twice daily GEMBA and during reflexive thematic analysis, causing the researcher to look behind what people were saying. An example of this is when the Plant B workforce reacted initially to my project saying that I was just another leader wanting them to do more with less, while plant A leadership reacted by saying that by driving out waste, we would make more money. With the eye of 20/20 LEADERSHIP and organizational justice, I had to coach both groups to understand what we were doing was right for the business and could also be right for the individual, but only by truly listening was I able to understand the perspective of their social community. As is evidenced by examples such as 'The Bob Project' (Appendix 4), leaders in both plants did not take enough time to really listen and value what their workers were saying. By doing this, they missed business improvement ideas from their teams. A repeating theme from the work force was their appreciation of the fact that I just took time to listen. From listening, I was able to present the PAR team's solutions to leadership, often when these were ideas the work force had been trying to get leadership to adopt for some time. Not listening to the team's ideas even when not completely formed is a mistake. When the credit for these ideas went back to the work force such as with the attendance focus group, the impact on the teams was invariably positive.

7. *Avoid rushing past 'rough diamonds' when examining data.*

7a. Unexpected value was found in the data during analysis. An example of this was that though quantitative analysis did not always demonstrate convincing change, qualitative analysis from individual's feelings and experiences did prove convincing.

8. *Force the asking of questions and the giving of provisional answers.*

8a. PAR puts the teams in control of their own communities whilst focusing on the business objective. This gives the team the confidence to ask questions and to find their own answers even when those questions and answers were not completely formed. Building a confident questioning organization using the vehicle of 20/20 LEADERSHIP promoted business success. When leadership embraces rather than fears the employee's questions and supports their own answers, then all benefit.

9. *Allow fruitful labeling of concepts although provisionally.*

9a. This is demonstrated in how the concepts in the perception survey were relabeled and refocused from the original 16. We also looked at changes that evolved overtime into questions that were far from those that were preconceived. PAR allowed concepts and questions to develop from the provisional to the fully formed that would directly impact business success. Provisional labeling allowed the discussion to be fluid and allowed change over time; this is exemplified in how the 20/20 LEADERSHIP model matured through practice and in using axial coding when developing RTA.

10. *Discover properties and dimensions of categories.*

10a. As detailed throughout this research, new dimensions and categories (the 20/20 LEADERSHIP principles) appeared during the threes RTA and with practicing the model. The value of PAR was also that these new dimensions, ideas, and suggestions were encouraged to create new paths of learning and growth in the workplace. Some of these new ideas are detailed in this text and others that were discovered, such as the emerging theme of leadership excellence as elevating levels of leadership consciousness are suggested as worthy of future research.

Success in Action Research

The acid test for a successful PAR project is that new knowledge has been generated participatively and that action on that new knowledge has been the driver for improvement. New knowledge was generated in both the 12 principles that form 20/20 LEADERSHIP and also the modified model of PAR for manufacturing. The preliminary and final projects have shown that change took place and that there was resulting organizational development and improvement in Operational Excellence.

Success in Qualitative Research

Gummesson (1991) suggests a list of questions to measure success in qualitative research that I have modified to help summarize what I learned during this research.

1. Have I made a constructive change for my business and what can I add to the body of knowledge?

1a. Both qualitative and quantitative data demonstrated positive results and change is being sustained by those leaders who bought into 20/20 LEADERSHIP as the agent of change. The 20/20 LEADERSHIP model in Company B and in some areas of both Company C Plants became the norm and has been carried forward into future leader training programs. In empirical terms, there are financial and OEE improvements, record production days in Plant A, and positive changes in company ranking of plants from lowest to highest in Plant B. OEE at Plant B increased from 64% to 78% after 6 months and was sustained. In the perception survey, evidence generally showed a positive move in the measured categories. 20/20 LEADERSHIP was the driver for change focusing the leaders to maximize the potential of their people through a secularized version of a Jewish model of leadership. This is best summed up by the Plant Manager of Plant B where he described the secularized model as “paradigm shifting.” However, this was a beginning not an end and this research does not have the benefit of a long-term longitudinal study (Adi, 2019; Tiantong, 2014) which would better illustrate sustained change.

2. What have I and the team learned from each other?

2a. We learned that most individuals do not come to work to do a bad job. When included in problem solving and given the opportunity to contribute and grow in an environment of organizational justice and respect with 20/20 LEADERSHIP focused leadership, most people rise to the occasion improving the business and themselves. The workers also learned that at least some leaders operate in a paradigm where they are sincere about growth and put individual success as at least equal to business success.

3. How can I apply the holistic learning gained from this project?

3a. Application of learning using PAR was integral to building and testing of 20/20 LEADERSHIP. In Companies B and C senior management have bought into 20/20 LEADERSHIP, and in Company C's Plant B, the GM is using 20/20 LEADERSHIP as the core of a now more wide-ranging future leadership training program.

4. How have I evolved as a practitioner in developing cooperation with my subject population?

4a. Not only have I personally evolved as an 20/20 LEADERSHIP practitioner and business coach, but this study has also developed me as a Jew and a Jewish leader. As well as the industrial FLP, I have also been asked to develop a strategy for self-sustained leadership training of Jewish leaders. This again builds on 20/20 LEADERSHIP to identify leadership potential, train future leaders, and provide a mentoring environment for those who are placed into a leadership position. Thus, industrial leadership practice in 20/20 LEADERSHIP has come back to the synagogue to train Jewish leaders not only through a faith model, but a faith model that these individuals can carry into all areas of their lives.

5. How is feedback working and is the flexibility of approach enabling or handicapping the project?

5a. Feedback was the heart of PAR from the teams to me, the teams to their leadership and between the teams when they found common areas. Feedback has been the life blood of this project, both instantly in reflecting in action and reflecting on action as a leader and now educator in industry. Adopting the discipline of constantly going through iterative cycles of action research impacts personal practice and business. The power is in driving the cycles, structuring them, and not allowing them to pass without exploiting the learning and business opportunities through meaningful feedback.

6. Is the ethical framework of this research still mutually acceptable?

6a. This is particularly pertinent to me in that the secular model is still a wholly recognizable Jewish model. How, when or if I expose the Jewish genesis of the model to a secular audience will be a question for the future. The Jewish origin of this model was not shared with the secular work force, though some knew that I am Jewish. This was to avoid bias but also a growing wave of anti-Semitism in the USA. The 20/20 LEADERSHIP ethical framework that the model has at its core has continued in Company B and has now been in place for three years and to a lesser extent in Company C, particularly Plant B. The framework is still mutually acceptable, and I see no reason why this would change unless some took offence to its origin in Judaism.

7. Do I better understand the corporate culture of the business as I become less an outsider as a new employee and more a trusted advocate of corporate change?

7a. In Company B there was a company culture which 20/20 LEADERSHIP, PAR and FLP helped to develop further. In Company C there was local plant culture but not a 'lived' company-wide culture. Bring the plants together under one culture provided a common culture and business direction whilst I was with the company.

8. Am I harmonizing the need for personal learning, with the need of the company to grow high performance teams?

8a. Through this research, I have undertaken considerable personal learning, and using this project and PAR have taken my companies forward. Was this growth harmonized? The answer is yes, as an evolving iterative program. I believe this is the nature of action research and its application in real time as I adapted and reapplied my secular and faith practice to leadership in Judaism and industry.

4.9.4. Managing Organizational Politics

The action researcher needs to be aware of the politics of the organization in which they are conducting research. The "politics of the internal action researcher is well documented" (Coghlan & Brannick, 2013 p.127). Particularly interesting to this study was how local power and politics impacted how individuals communicated with each other. In Company B, information was translated in the telling with overtones to benefit the giver rather than the receiver. Communication was an element of political power play. These political communications reinforced sub-cultures that enforced separation not bridge-building, which is contrary to 20/20 LEADERSHIP. I also had to be aware that as a leader in this organization, I was part of these politics and would be viewed as such. To truly be an internal researcher and an equal PAR team member, I wanted to be seen to be outside of organizational politics. Through building quality relationships and therefore trust, I went some way in removing this potential barrier, but the reality is that I remained a salaried manager working largely with hourly employees, constantly aware of the need to balance the organizational politics with the needs of being a practitioner of 20/20 LEADERSHIP. I also had to be aware that it would not be until those with whom I worked trusted me as a team member and not just as a 'boss' would I be able to work with them in an a-political way.

A K-A Reflective Practice.

This was in stark contrast to my RAF experience where I was not aware of any organizational politics until at the most senior position in the last two years of my service. In that last two years, I was being guided by my leadership on a project for which I could find little justification with the customer. When I ultimately addressed this, it did not go well for me, but with a change of leadership, the same argument saw the project cancelled at a saving to the taxpayer of £40M. Doing the right thing is not always the easy thing but reading the politics is essential if one wants to succeed.

I needed a way to change this negative use of communication to reinforce politics and power play. During my MA study, I became aware of the seminal work 'I'm OK -You're OK' (Harris, 1973) and had been employing Harris' transactional analysis in my practice for many years. Harris' theory of transactional analysis and how verbal transactions play out is a fundamental tool that is accessible to all. I wanted to use this as an opportunity to teach that every interaction is an opportunity for growth, a fundamental of 20/20

LEADERSHIP. If I were to be successful in reducing customer complaints in Company B, communication would have to improve. Though organizational politics could at best only be moderated by language, I could at least make individuals aware of the power of what they said and how they said it, to moderate power-play and organizational politics.

The teams in my case study projects mostly reacted positively when put at the centre of the change in their own social construct to drive the change to their own benefit. Though the term is usually applied to technology, some were early adopters of 20/20 LEADERSHIP, the majority bought in overtime, a few did not adopt at all and some of these did not survive the transition. During PAR, the team members benefited from building quality relationships; they built mutual trust and grew engagement in how they worked with each other. 20/20 LEADERSHIP provided a positive leadership model that they felt was a force multiplier for change rather than just a clinical application of tools such as Lean (Rother, 2010). As control and trust are on a continuum (Anon, 2019), PAR and 20/20 LEADERSHIP working in tandem move the needle from control to trust (Forbes, 2018; Covey, 2006). In PAR, leaders do not need to use command and control; rather, they need climate control (Robinson, 2017). They need to control a climate that encourages workers to engage in their own change, change that drives business forward rather than maintaining an inefficient status quo. Using the 20/20 LEADERSHIP model moved the dial on the continuum away from leadership control toward collaborative team based mutual investment in the task through building trust.

4.9.5. The Challenge of Middle Management

It should be observed that the above findings highlight a problem with implementing 20/20 LEADERSHIP as a middle manager. All managers have to buy-in for uniform application in a business. In Company B, over an almost 3-year period of time, the GM was my greatest advocate and thus I had a large degree of success in affecting the entire business culture. The literature is currently very vocal on senior management support of middle management (Gilbert, 2009; Van Fleet, 2018; Koene, 2017; Biro, 2015) as drivers for change success and such was my experience during this research. It seems that the combination of the practical qualities and experiences of middle managers to identify and drive the change, and the strategic view of senior leaders to keep everything aligned would appear to be the most effective deployment of talent and resources in driving 20/20 LEADERSHIP and any organizational change. However, as was my experience in Company A only when senior managers consistently promote such a cultural change will such a a change be sustained.

AKA Reflective Practice.

My responsibilities continually changed over the period of this research, which is the reality of industrial leadership at a corporate level in the USA. The real world of continuous manufacturing did not allow for an uninterrupted linear project. Had it done so, the project would have been far simpler, but the results would have not been as useful as those I achieved, these reflecting the truth of a complex journey.

I also had to find ways to ensure collaborators' on-going commitment to the project would equal my own when I had to move to other business projects, other locations, and other responsibilities around the USA. This was only partially successful as when difficulties came along, they would prioritize what other leaders were demanding ahead of my research when I was not there to show them that they could meet priorities and maintain both 20/20 LEADERSHIP and PAR. I needed them to see past the history that had failed them, to see a new reality that they could make for themselves. This included follow-up emails, telephone calls and attributing specific tasks to individuals with continued remote mentoring and coaching. However, this did make me mindful of the need to consider the repeatability of the 20/20 LEADERSHIP model without me. This is actually very valuable in considering the next AR project and setting up my own and my contributors' expectations and expected outcomes.

4.9.6. Distinctiveness of PAR When Used in Manufacturing – A Practitioner Observation

As discussed, the literature is almost silent on the use of PAR in manufacturing. One model of the researcher as facilitator (McArdle, 2008 pp. 650 - 653) does provide a valuable stepping off point to describe how PAR evolved in the practitioner-based projects in this research. However, the McArdle model only goes part way to describe my experience in manufacturing which had its own distinctiveness. Table 8, describes that distinctiveness when compared with the McArdle model.

	Work Role	
	Researcher – (McArdle 2008)	Practitioner - Kenneson-Adams
Characteristics		
1 Problem/research question	Has opportunity to begin with problem or research question with context, purpose, and construction	Starts with context, purpose and construction of research given by business leaders.
2 End goal	Does not begin with a specific end in mind	Specific business goal in mind but journey is emancipatory
3 Researcher status	Member of a team of researchers	Solo researcher and employed by the business
4 Project focus	Research	Both business improvement and research
5 Research location	Outside of the organization	Inside the organization, and personally invested in the project in terms of career, salary, tenure.
6 Research context	External researcher operates in one organisational location	Internal researcher responsible for multiple locations

7 Researcher points of contact	Researcher works with professional, full time managers	Researcher works with professional, full-time managers, and with skilled and unskilled (minimum-wage, temporary) employees
8 Research setting	Administrative	Industrial

Table 8. The Distinctiveness of Practitioner PAR model Compared with McArdle (2008)

4.9.7. The Role of the Researcher as Facilitator

In the use of her model, McArdle (2008 p.662) states that:

"I use the term 'facilitator' as this is the label most usually applied to my role by the organizations I work with. It is a term with baggage, suggesting all kinds of assumptions about power and authority in the group, which I spend much time actively dismantling. It makes sense to use the term to denote an 'initiating' or 'methodology expert' role."

In this research, my role as a researcher and salaried internal consult was also that of a facilitator. My definition of facilitator in this research expands on that of McArdle's from being the facilitator as 'initiator,' to becoming facilitator as a mentor and coach that is personally responsible through a journey of emancipatory PAR to deliver the business need given by my line-management. Additionally, my facilitator role may have to situationally move to that of 'command and control' whilst maintaining the integrity and trust of the team to revert to being the researcher as a collaborator. I also have to be more than the researcher as a 'methodology expert,' having also to be the technical process expert to ensure I do not advocate usage of unsafe or detrimental processes but, and this is an important but, without pushing my views and solutions ahead of those of my collaborators, even if my solutions may in my mind faster, or more efficient. If I take on this directive role, I destroy the collaborator experience and growth, and negate collaborative research. I facilitate success in others whenever possible not default to the director role. This adds a further layer of complexity when in the emancipatory role, as I have to be ever mindful of suggesting or giving answers to problems. This must include the conviction in the minds of my collaborators that I am letting them proceed as letting is also a form of control which I choose to avoid. Emancipatory collaboration must be just that emancipatory, whenever that is possible. This includes letting the team fail, provided that they fail safely and without permanent detriment to the business. This is demonstrated in the Plant B RCPS process where if I had been working in command and control, I would have given them the solution and not allowed the team four months to get to the solution. This is where expertise as a facilitator as mentor or coach is critical.

4.9.8. A New PAR Model for Continuous Improvement in Manufacturing

Research gaps were revealed in the operation of traditional PAR as I reflected during the change project case studies in Companies B and C.

1. The diversions and messiness (Arnold, 2018) experienced when undertaking real-world PAR in practice frequently undermines the linear progression of the traditional PAR process.

2. The transfer of control of the modified PAR process from the researcher to the business personnel as quickly as possible contrasts with traditional PAR in which the research is still owned by the researcher.

3. There is a need for PAR to be used as a vehicle for Continuous Improvement (CI) for shorter projects owned by the business, which require a research-based process to achieve success.

4. Working in industry the change leader (i.e. the researcher in this project) must work with people at three levels: on the shop floor are the workers who operate the machinery; at the intermediate level are the official team leaders (supervisors or change team leaders); and at the 'higher' level are one or more layers of line managers (Directors and VPs). This three-level perspective is rarely -- if ever -- described in the AR literature. Thus, the change leader must be highly adept at communicating both the 20/20 LEADERSHIP model and the benefits of PAR with all these levels. Having the 12 principles written in plain language is a considerable benefit in this regard as is demonstrating progress for the business at each stage and as quickly as possible.

It therefore proved necessary to design an innovative version of PAR for application in manufacturing which transfers ownership of the change process to the teams as quickly as possible. This provides teams with the tools to establish their own culture of continuous improvement through PAR. This model may also prove useful to others in fast-paced changing applications or when a more stable research platform is not possible.

List of Actors

The model is based around my experience in the paper industry and is operationalized by 4 primary actors who become a PAR team.

1. Researcher. This role changes considerably over time and transitions through consultant/facilitator/research leader/mentor/coach and finally observer based on need and where the business is placed in the ownership of the PAR process.

2. Senior leadership. The senior leadership are the department heads, General Managers, Plant Managers, etc. These individuals will particularly initiate the first change programs and are the final arbiters in the report-out phase of how successful the project may or may not have been. They may be part of a PAR team but often will delegate this to the supervisors and workers.

3. Supervisor. These are the shop floor leaders who will be responsible for the logistics of setting up the PAR team, arranging meetings, etc. The supervisor is also the individual who takes responsibility for the shop floor operation of the PAR project, particularly if the researcher has to leave the research site for any reason.

4. Worker. These are the machine operators, mechanics, administration staff, etc. These are the first line operatives in the business who will usually have to own the output of a change.

Though aligned with the traditional PAR model, this model's emphasis is in the all-important interactions between the actors in its execution and keenly with the researcher in handing responsibility for the PAR process back to the workforce. The imperative throughout is always to move from researcher to observer as soon as the team is ready.

The modified model has 4 broad stages containing a total of 7 steps. The 4 stages are: Step In, Step With, Step Aside and Step Away. Reflection is required at each stage. The purpose of this model is to establish the business need, build and execute the plan with a PAR team, report back on the achieved objective to senior leadership, and sustain continuous improvement.

The context and purpose of PAR in manufacturing is to improve business, usually through Key Performance Indicators (KPIs). These KPIs will usually be through the components of OEE, i.e., process speed, product quality and production quantity. Importantly, the new model is practiced whilst using 20/20 LEADERSHIP as the vehicle to promote cultural change in a participative effort. This model adds a final step that is not included in the traditional AR cycles to establish a continuous improvement culture through mentoring and coaching change agents in the business. This last step is a CI action and is carried out by employees who have been PAR team members of a previous PAR project. These then teach their peers so that they in turn carry out their own continuous improvement projects, as was seen in Company C Plant B in this research project. This step also engenders followership and deepening levels of participation as previously discussed.

Step 1. Step in. (Business need)

a. The internal researcher steps in to work with senior leadership and or supervisors to understand the business need, the reason for the desired change. Business may already have a general understanding what they need to improve business, but they may need a researcher/facilitator to refine this need into a specific objective and help company leadership to prioritize areas for focus, say via a perception survey.
    i. *For example, Company B had a defined goal of a reduction in customer complaints but did not know how, and Company C needed a Perception Survey to define what areas were required for specific attention to improve OEE*.

Step 2. Step With (Planning)

b. Researcher facilitates production of the plan with the company to enable achievement of the business goal. This brings in any personnel who can add value in participative research.
    i. *For example, machine operators who will own the solution when the business need is achieved or analysis of possible categories for change such as with a Perception Survey to ascertain priorities*.
c. Researcher trains the team in cultural and technical skills needed.

i. *For example, in Company B and C, PAR, 20/20, and Operator Basic Care, Gemba, 6S, Visual Management, RCFA, Mentoring, Coaching.*

d. Researcher sets up weekly coaching with key leaders, and senior leadership debrief on at least a monthly basis.

e. Researcher then takes the lead in setting up the project with the team according to the agreed plan allowing the team to take the lead whenever possible.

Step 3. Step With (Initial Action)

f. Working collaboratively with the team the plan is put into action. The researcher passes all leadership to the team as quickly as possible.

   i. For example, team takes over the Gemba as soon as they are able as in Company C Plant A. Visual management board presentation moves from researcher to supervisor to machine operator.

g. Mini-action cycles can flow off the main project, as necessary.

   i. For example, Operator Basic Care Manuals Company C, Plant A.

   ii. Machine cleaning and painting in Company C, Plant B.

   iii. Color Coding Spiral machines in Company C, Plant B.

Step 4. Step Aside. (Further Action)

h. Researcher takes the role of mentor and coach and begins to step back as soon as possible allowing the team to own and refine the plan.

   i. Consultant sets up monthly coaching session with key leaders.

i. Mini-action cycles can flow of the main project as necessary.

Step 5. Step Aside (Observation: Explain what is being observed and evaluated. Does it need another cycle?)

j. Researcher now looks on as the team execute the plan and steps in only if required.

k. Researcher maintains availability but Company is now essentially owning and sustaining the project objectives.
l. Mini-action cycles can flow of the main project as necessary.
m. Researcher aids the team as required to prepare project evaluation for presentation to the senior leadership.

Step 6. Step Out (De-briefing)

n. Researcher is now an outsider but attends the project debrief to the senior leadership to support the PAR team if required. There are two outputs to be prepared for the debrief, the business output and the research output.
    i. *The business output is the data that demonstrates the change is significant.*
    ii. *The research output is a paper or report to be distributed or published.*

Step 7. Continuous improvement

o. From the training received from the researcher through the first project, the now at least partially experienced teams take on their own new collaborative PAR projects to self-facilitate continuous improvement in the business as soon as they are ready. Failing safe is an option.
    i. *For example, Company B, Plant A warehouse re-organization.*

The model is presented in two variants. Figure 19 illustrates how it is used with senior leaders such as with the formation of the Hebrew School, and Figure 20 illustrates its use in the bulk of the research undertaken in Company B and Company C with operators, supervisors and senior leaders.

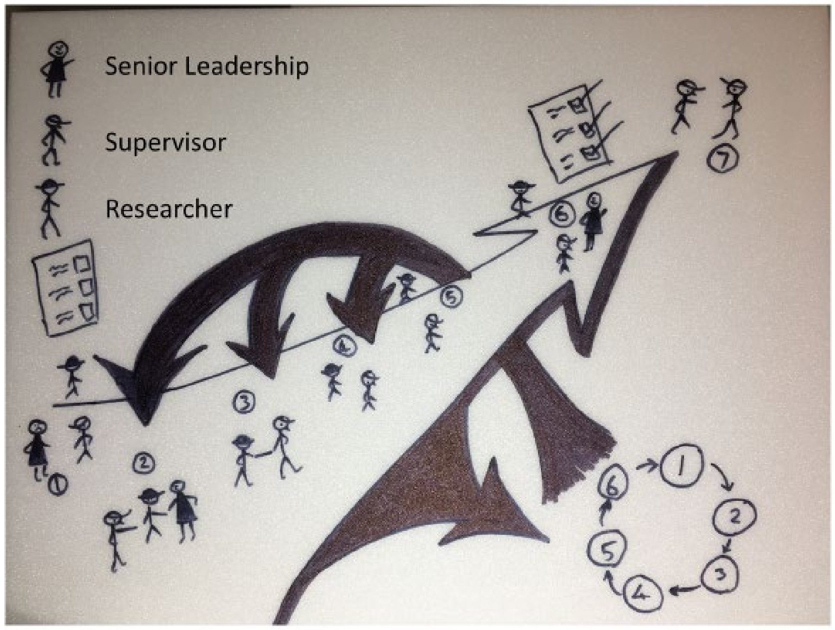


Figure 19. Diagram to Illustrate the Use of Modified PAR with senior leaders.

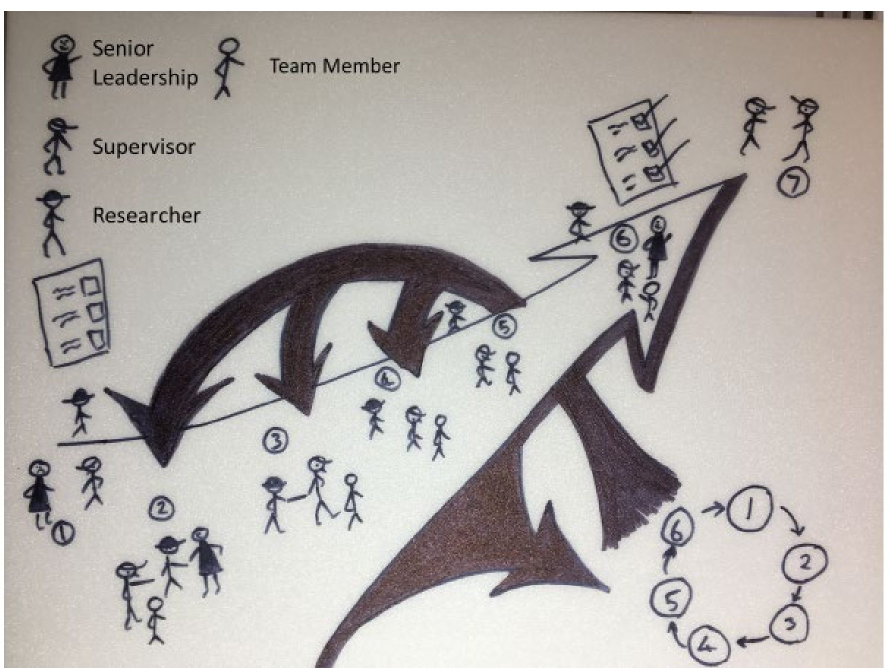


Figure 20. Diagram to Illustrate the Use of Modified PAR with PAR Teams.

Due to the diversions from focusing on one task at a time in real-world manufacturing, this researcher found that the projects were rarely linear and so the teams and leaders had to be open to return to any of the previous steps of the process to get the goal back on target. When I carry out future operationalization training, the modified PAR cycle will be added as a step-by-step drawing to explain modified PAR for continuous improvement. The black arrows represent taking the team through repeat loops if required, before putting the team back on the main path to achieve the primary objective. An example of this need for realignment was experienced in Company C Plant A when the leadership stopped the 20/20 LEADERSHIP PAR projects when the researcher had to carry out duties at another site.

4.9.9. Chapter Conclusions.

Success of Modified PAR in Manufacturing.

When used with 20/20 LEADERSHIP, the modified PAR model is as much about participatory action to drive OPEX in business as it is in generating new knowledge. Business rarely has the luxury of conducting research for purely academic pursuits; business requires efforts focused on the bottom line. Furthermore, this model should not be thought of as purely a vehicle for problem solving as in Company B. This modified PAR model, in combination with 20/20 Leadership, should be in the forefront of senior leadership's minds at the beginning of every business planning cycle. It is in this proactive fashion that leaders should ask who should be brought into the conversation to define the problem, plan the action, execute the action and initiate new participative action learning cycles and new projects that can take business forward. This is why in Figures 18 and 19, the first step is agreeing the business objectives whose outcomes can be measured at step six.

Triangulation demonstrates that both organizational development and improvements in operational excellence had taken place as a result of the application of 20/20 leadership. The data collected during the research at Company C also provided for three major modifications of the model that can now be put into practice for future application of the model. Of specific note is that it was not the purpose of this research to design a modification to PAR. However, such a modification was required to meet the real-world necessity of carrying out participatory research as an internal researcher in a fast-paced manufacturing organization. This new model adds to the originality of this research.

Chapter 10

4.10.1. Emerging Themes, Limitations and Recommendations for Future Research.

The main aims of Chapter 10 are:

1. Summarize and conclude this research.
2. Discuss new themes that have been raised in this research, the limitations of this research and opportunities for future research.
3. Discuss the originality of this research.

Several new themes emerged during this research:

1. The extra effort required in leading change as an 20/20 LEADERSHIP leader in a team-based working environment.

Jewish culture is deeply embedded in the interdependence of people. That interdependence stems from a history of being on the outside of mainstream communities and a need to pool resources in many cases just to survive. This is still true post-holocaust with the rise in anti-Semitism. My RAF career was built on the shoulders of those I had the honor to lead. I bring these same philosophies to PAR, that “nobody is as smart as all of us” (Blanchard and Johnson, 1982). Team-based working in this context is focused on the other person’s well-being and success to achieve a stated and focused mission. This is echoed by Procter and Carrie (2004) who argue that in the case of their research of ‘targeted-team-working’ in the UK Inland Revenue, team working came through interdependence engendered by the emphasis on the team’s work targets. However, the weight of this team working is not carried equally, particularly when a new culture is being built that needs to be driven from the middle of the organization and not from senior leaders or central policy. 20/20 LEADERSHIP is not an easy way to lead but I believe it in the context of these projects it was the right way to lead. 20/20 LEADERSHIP is a more pastoral method of leadership as one may expect from a faith-centered leadership model. Almost without exception that extra effort brought accelerated team building and achievement of the target. These relationships needed extra work (Principle 11) to build trust as the motivation is the business and not personal gain. Figure 21, represents how the extra effort and pastoral leadership brought increased follower growth and deeper levels of follower feedback which in turn brought deeper buy-in and commitment to the goal.

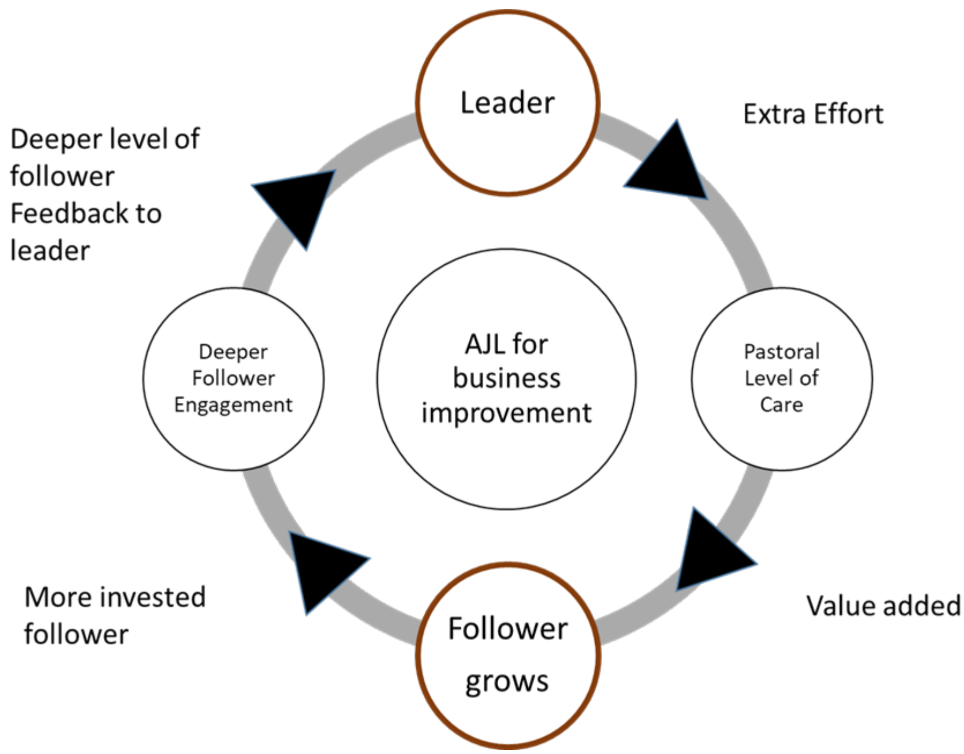


Figure 21. 20/20 LEADERSHIP Follower Growth and Engagement Circle. (Source: Author)

2. Exercising leadership in the absence of line management authority.

One can lead without having to use authority (Blau, 1964) when the team sees an individual who is removing the barriers to enable their success. Relationship, trust and respect trump rank and authority.

At senior levels in civilian leadership, I had no direct authority at the plants and had to work with influence, though the work force saw authority from my experience and direction and voluntarily became my 'subordinates.'

Business change through influence rather than authority (Paragraph 1.2.3) is the core of the Behavioral Insights Team, which started as a think tank of 10 Downing Street and is now an international change leader in promoting behavioral change in 'people's lives and communities.' This is also the focus of Fisher and Sharp (2004), who determined that collaboration in organizations can be improved when the facilitator is conscious of improving personal skills, knowing what good looks like and knowing how to influence others.

They also state that the facilitator must have personal discipline and good self-organizational skills to be able to influence and model behaviors. For peer collaboration to work well, a team must pay close attention to five key dimensions in the following sequence, Purpose, Thinking, Learning, Engagement and Feedback (Fisher and Sharp, 2004). These behaviors align with the AR models described in Part 1. My military training and spiritual discipline also align with the five dimensions and are certainly the grounding that promoted the business success using 20/20 LEADERSHIP in PAR. My practice and research have found that using 20/20 LEADERSHIP to generate communities enables leadership to come from the middle of the organization even without authority when the change leader develops relationships where employees voluntarily follow.

3. Leading change as a bottom-up process in the face of counter-productive top-down decision making.

There are considerable problems when senior leadership undermines team and middle level leaders with seemingly arbitrary instructions that have no human connection and show no concern for the people in the team. This includes random reorganizations, management changes and lack of credibility when leaders say one thing and then do another. Through the cycles of this research, I experienced three business reorganizations where my job was removed or fundamentally changed; all of these were as the result of top-down decision making and all impacted my teams and left them leaderless and confused. Business must make decisions and buy-outs happen. However, presenting the work force with a 'fait accompli' erodes trust that either takes considerable time to rebuild or is never rebuilt. When this happens, such as with Company C Plant A and B, it can cause considerable problems for the researcher. If the employee cannot trust the employer, can they trust the 'leader' of the action research? My experience is that if one has built quality relationships, then one can move though the transition – if one has kept the job. In company B, my job changed three times in two years, but I was able to carry trust and relationship with me as a result of being known as a fair and people focused leader (operating tikkun olam, chesed and tzdacha) – precursor to 20/20 LEADERSHIP.

4. Leading by example - Walking the talk.

A leader's credibility (Kouzes & Posner, 1993) is built through quality of relationship (Mitki, et al., 2000), and a genuine desire to see success in others and importantly for followers to believe that the leader wants them to be successful. Leaders are not special or set apart; they are merely the individual with the position and opportunity to remove barriers to build success in others. Even the leader 'vision thing' pales in comparison to what followers really want, which is a sense of trust, stability, hope and compassion (Rath, 2008). The leader has to invest in success with the followers and that sometimes means the leader getting their hands dirty with the followers and working longer hours to enable the followers and remove barriers. However, followers will not continue to follow without success so leaders must provide that success, lead by example and work with the followers to achieve the results. It also means that leading by example and walking the talk means that the leader is willing to sacrifice of themselves (Mathis, 2016), their time and energy, and give extra effort (Principle 11) but that effort brings reward for the team and the business as well as the individual. The ultimate demonstration of this is when the team is successful through their own leadership and self-determination with a paradigm shift such as Kiasen Teian (Marcum, 1995) or highly participative teams.

4.10.2. Limitations.

1. Quantitative Data Analysis

Quantitative Data Analysis of the perception surveys was limited due to the real-world constraints of small numbers of team members and trying to measure change in just two sets of data collected over a short period of time. Therefore, traditional quantitative tools such as T-test to obtain P values were underpowered, therefore visual inspection of data was also required. Visual inspection was however not carried out in isolation and the leadership teams of both Plant A and Plant B were presented with the data and asked to participate in validation (Colón, 2006) of the visually presented data. At Company C Plant B, we had already planned a third perception survey to better confirm real world change when the company was sold and my OPEX department cut as a headquarters saving. This was very disappointing for me as a researcher as well as for the Plant leadership who had seen such benefit from 20/20 LEADERSHIP implementation, but such is the real world of manufacturing.

2. Longevity of Change

Change must be of sustainable benefit to the business to merit the disruption it causes. At Company C, where the change was driven by my research and not as a company culture, should I have embarked on the change at all, when there was always the possibility I could be moved before the cultural change became the normative culture of the community? Should change have been avoided if my absence would lead to discontent leading the team to return to old ways? I achieved longevity of change at Company B because I had the time to prepare them for change, complete the change and have a year of sustaining the change to make it the norm. In company C, I did not have the time for these three elements and thus the success we achieved may be severely limited or short lived.

3. Readiness for Change

Company C Plant A needed change and I needed a project but neither the employees or leadership were ready for change, socially, professionally, or psychologically; therefore, more energy was put into maintaining the change process than nurturing the change to the maximum benefit of the business. In the future, I may not even begin a change of my own volition unless the organization has been prepared to put their arms around the need and process for change. Without being ready for change there may be greater resistance to change, but without change business will not stay competitive or flexible to be able to adapt quickly enough to gain business advantage. However, it is also essential to remember that even if an organization wants change and is ready for change, lack of leadership able to lead change will stymie the organization as was experienced in the inception of the Hebrew School. Lack of readiness for change in Company C Plant A was a limitation in this research.

4. Sustaining Change.

Before any change program begins, the organization needs to understand the energy they will need to put into owning and sustaining that change. Company C Plant A saw me having to initially own the change and when I had to step back the change was not sustained. In Company C, the impending buy-out compelled me to focus on others owning the change before they were truly ready. However, in Company C Plant B, they have a good chance of making change systemic as they were ready for change and bought into 20/20

LEADERSHIP from the outset, that was sadly not the case at Plant A. The lack of initial buy-in to 20/20 LEADERSHIP at Plant A coupled with me having now left the Company makes me think Plant A will not have the same chance of success of sustaining 20/20 LEADERSHIP as Plant B. The buy-out and being unable to follow up on the Company C change with a longitudinal study is a limitation on of this research.

5. Location of Employment

I have discussed at length the real-world limitations on this research due to moving jobs, changing leadership and business buy-outs, as well as having had responsibility for multiple locations. Not carrying out each cycle in isolation and at the same location would be a major limitation if the research was about demonstrating the effectiveness of PAR to effect change in one problem or as a longitudinal study of a single problem over several years to the point that the change became systemic. However, this research is about the effectiveness of the 20/20 LEADERSHIP model, and the multi-domain approach that informed my practice in building of the 20/20 LEADERSHIP model showed the flexibility of the model to achieve change. This potability of the model shows that a committed user can have benefit to business even in truncated periods of time. However, not being able to focus for a complete cycle at one location was a limitation on this doctoral level of research.

6. Introducing Confusion Due to Lack of Established Culture

At Company B, 20/20 LEADERSHIP became the normal way of operating due to my three-year tenure as is evidenced by its retention even after I had move to Company C. Culture change was not the case in Company C Plant A during my limited time with the company. In introducing 20/20 LEADERSHIP I introduced a new culture which I did not have the opportunity to see become the norm, though had I stayed at Company C and it had not been purchased, the manufacturing VP was keen to roll out 20/20 LEADERSHIP as a culture change across the division. The new owners of Company C put up a new culture poster but left the business in a state of confusion as the new culture was enforced during a period of 20/20 LEADERSHIP change which was gaining popularity. It could be argued that cultural change should only be commenced if a known period of stability is on the horizon. However long-term planning is difficult in my industry and doing nothing is never an option.

4.10.3. Future Research.

Replication

The next step for this research will be for others to attempt to replicate the outcomes I have achieved. It will be for them to teach, model and lead 20/20 using modified PAR in their own organizations. These new results will continue to validate 20/20 and modified PAR.

Leadership as a State of Elevated Consciousness

Moving through this research I became mindful of how the leadership journey mirrored my faith journey in the regard that it was elevating my level of consciousness of leadership whilst deepening my commitment to the community. Ward (2016) does offer an insight that conscious leadership is mindful leadership and in that sense is a blend of science and art, combining the science of leadership theories with the art of understanding the human experience. Conscious leadership creates opportunities to unite science and art for the good of the employee. This has echoes of Maslow and his theory of moving toward self-actualization and of Kabbalah in mystic Judaism. My leadership journey has also been about expanding my authenticity to become more accomplished for the benefit of those I lead and to impact the business bottom line. My Jewish journey has been about expanding my mind to the possibilities of a creator with whom I am a participant in completing creation. As an authentic leader, these two journeys converge in a new consciousness combining my Jewish self and my leadership into one. Figure 33 is a representation of this journey of elevating leadership consciousness.

My leadership practice now lets me see complex challenges in leadership almost from above the situation looking down whilst being able to orchestrate what is happening on the shop floor. The advantage of this model is as a signpost to others of what has worked for me. Developing the idea of improving leadership as levels of heightened consciousness Figure 22, merits further research.

Figure 22. Leadership Consciousness Growth Triangle. (Source Author

Organizational Culture

Growth in organizational culture measured in the perception survey was bounded by the completion of this research. It would be useful for future research to go back two or three years later to understand the long-term benefits of 20/20 LEADERSHIP and then align those results with other programs of differing models that have been in practice for similar lengths of time.

Leadership Preparation

As future research it would be interesting, if it were possible, to go back to Company B and Company C and survey the PAR participants and compare how better prepared they had been for leadership compared to others who had no leadership training or training other than 20/20 LEADERSHIP to make comparative observations.

Communication

Neither of Company C's Plants fully exploited communicating the effect of the change as a force multiplier for organizational development despite repeated encouragement to do so. This slowed down change in some areas as talking about change success is also a driver for change. This needs to be more fully understood and it would be useful for future research to understand why the teams did not communicate and celebrate their success.

Loyalty and Longevity

Can 20/20 LEADERSHIP reverse the antagonistic trend between generations to create loyalty and build longevity of relationships between baby boomers and millennials? This short study was not focused on this as an aim so future research on this question is required.

Readiness for change

Readiness for change has been discussed in depth throughout this research. Peer reviewed literature is available that discusses how to position a change effort based on an assessment of an organization's readiness to begin a change program that could be tested in industry. Change management experts have emphasized the importance of establishing organizational readiness for change (Weiner, 2009), though this has not specifically been applied to unskilled labor in manufacturing. Therefore, unlike individual readiness for change, a manufacturing organization's readiness for change has not been subject to extensive theoretical development or empirical study (Weiner, 2009). Future research should look at building the scientific basis to 'front load' the success of change programs in manufacturing and how PAR and 20/20 LEADERSHIP could be used as vehicles for building a readiness for change in the industrial process.

Sustaining the 20/20 LEADERSHIP Model

In Company A, the replacement GM wanted directive leaders that resulted in me being made redundant under a company reorganization. In Company B, my GM agreed with my approach to participative change, he encouraged this research and maintained the leadership culture after I left the company. In Company C, the CEO, and my VP recruited me because they were already aligned with business improvement through cultural change and built a department of like-minded individuals who brought change, and made the company an attractive prospect for a buy-out. At the buy-out in Company C, the new CEO and VP wanted process not people to drive cultural change and overnight my VP and my entire peer group who were responsible for OPEX by cultural change were made redundant. All three companies in which I worked were part of mergers and acquisitions both as the buyer and the purchaser. Introducing cultural change particularly sustaining it to the point it becomes the norm, is contingent on the understanding and buy-in of the senior leaders (Buchanan, et al., 2005). But what happens when those senior leaders are also hired and fired. Change is thwarted by new management that can cause instability in the business and take the organization backwards, as discouraged individuals see lack of leadership direction and coherence. It is here that many forward-looking leaders and employees leave a company. If such mobility is to be the new norm in industry, how will it sustain a working culture that promotes success for people, project, and products. This must surely be a major topic for future research.

Future research could be carried out on the applicability to coaching manufacturing supervisors and operators via the new web meeting tools in a manufacturing environment to ascertain utility in sustaining change. It is important here to bear in mind this would also have a financial cost as coaching would have to be carried out off-line and extra staff would have to be brought in to run machines. Another opportunity for future research would be to balance remote coaching cost measured against the improvement to the bottom line if this could be isolated for accurate measurement.

Comparison of 20/20 LEADERSHIP with Other Leadership Models: a Historical Perspective.

It was not the purpose of this research to undertake a comparative analysis with other faith or secular models. However, it would be worthwhile to comment on similarities between 20/20 LEADERSHIP and two very popular (and in Jewish terms, new) leadership models from an historical perspective: servant leadership and AGILE leadership.

Greenleef, who is considered the grandfather of the modern empowerment movement in business with his seminal publications (Greenleef 1977, Greenleef 1996), postulates that true leaders are those who lead by serving others. Eva et al., (2019) provides a systematic meta-analysis of servant leadership spanning the years 1998 to 2018 concluding that servant leadership still has its critics as there are still lingering questions about the conceptual and empirical overlap with transformational, authentic and ethical leadership. I concede that 20/20 LEADERSHIP also has overlap with other models of leadership and that this is not a problem for a leadership practitioner. All leaders are individuals who in practice adopt a style of leadership that borrow from many models. This in turn creates a particular leadership style that if carried out reflectively and will be congruent with their authentic self. It is not that the edges of a particular style must be defined so that an individual's leadership never strays from within a boxed set of rules, but that they are aware of types of leadership and then lead in such a way that is authentic and builds individuals, teams and businesses. Boyam (2008) supplies a concise description of the historical and philosophical influences of servant leadership first discussed by its proponent Greenleaf in 1966. Boyam (2008 p. SP-9) states that Greenleaf was "a committed Quaker grounded in a biblical world-view that advocates the integration of spiritual faith in all aspects of one's life." This is a principle founded in Christianity's precursor, Judaism. Boyam (2008) further quotes Sendjaya and Sarros (2002 p. SP-9) where they contend that "Judeo Christian and biblical teachings are foundational to servant leadership and thus inform and direct the act of servant leadership." Finally, Boyam (2008) quotes Warren (2003) stating that "there is a biblical precedent for servant leadership." With Torah being a foundation of Christianity, it is therefore not surprising that 20/20 LEADERSHIP which was founded in Torah, and servant leadership which was founded in Christianity have similarities. Jesus was a devout Jew, who attended synagogue, who was made a Bar-Mitzvah and whose teaching echoed his Jewish theology in stories such as the widow's mite (Mark 12:41-44, Luke 21:1-4) which is tzdacha, the good Samaritan (Luke 10:25-37) which is chesed and numerous stories of caring for the sick, loving your enemy and talking care of all levels of society including adulterers, tax collectors and sinners which is social justice - repairing a broken world, which is tikkun olam. Thus, the core values of 20/20 LEADERSHIP (Jewish principles), predate servant leadership (Christian principles), by over 2000 years. Boyam (2008 p. SP-8) concludes his presentation stating that, "Although theory building can start by either inductive or deductive means, it ultimately seeks to identify generalizable truths." This paper goes a step further by not only identifying generalizable truths (20/20 LEADERSHIP) but then uses empiric testing to demonstrate the validity of those truths.

Lastly it would be interesting to look at comparisons with some other faiths. I have discussed how Loa Tzu (Taoism) has been an influence on my practice with its alignment with Judaism and Kabbalah. Islam with its origins in monotheism and the patriarchs of the Torah acknowledges Jews, Christians and Muslims as 'children of the book'. It is therefore no surprise that Islam also shares the core principle that I have used to derive 20/20 LEADERSHIP ie. Tikkun olam – social justice (Al-Halawani, 2015), tzdacha – anglicized as sadaqah in Islam and also chesed – acts of loving kindness which is Islam is particularly to parents, the environment, to the poor and the stranger (Shifa, 2017). Thus, 20/20 LEADERSHIP has obvious resonance with all monotheistic religion and also secular cultures that have derived from these faith-based roots such as secular society in the USA, UK etc. Future research on the impact of Torah on various forms of leadership in Christianity, Islam and derived cultures would be of interest to leadership practitioners.

Language.

A point of interest in this study was how quickly team members began to emulate the language that I used in facilitating this research. Future research could ask if in industrial organizational development does language change actions or do actions change language. How much is a change in language an indicator of change in culture?

4.10.4. Final Conclusions and Reflections.

This research began by asking three questions.

1. What are those elements of my history, culture and practice that have caused me to lead in the way I do today?

This research revealed that how I lead is a function of a core faith and how I have experienced leadership over time. Key to this is a compulsion (mitzvot) to promote social justice (tikkun olam), and to promoting an ethical and participatory model of leadership for the purposes of promoting business and the growth of teams and individuals. My leadership is about others not career progression, in Jewish terms leadership is a covenant (Hb – brit) and this leadership covenant is exercised in all areas of my leadership practice be it in faith, force or factory.

2. What can I bring from my Jewish faith-based leadership background, coupled with my 30 years of RAF service and 12 years leadership in industry to construct a model of leadership that will be equally effective in the synagogue and on the shop floor?

The heart of my leadership is to lead with authenticity, justice, kindness (chesed) and building relationships with my teams with a giving heart (tzdacha)). I recognise that this takes extra effort and commitment but more importantly it takes a high level of motivation to sustain this effort to leadership in an almost pastoral way.

3. Once secularised and operationalized, can this new leadership model become a driver for organizational development and operational excellence in manufacturing and, with suitable modification, in other contexts?

This research has demonstrated that the 20/20 LEADERSHIP model delivered participatively can drive operational excellence at individual and team levels that in turn can lead to organizational development. Importantly, the model can develop followership so that second generation projects achieve success without further input from the researcher.

Originality of Research

The originality of this research is seen in the synergy of a new model of leadership based in core values of Judaism called 20/20 LEADERSHIP, that was operationalized and then demonstrated with a new model of PAR for problem-solving that promoted OD and OPEX in a complex manufacturing environment. A Jewish model for secular manufacturing leadership is absent in the literature as was the successful use of a modified PAR for use in manufacturing environments.

Though elements of 'modern' leadership models such as servant leadership and agile leadership can be seen in 20/20 LEADERSHIP, it is important to remember that this model was derived independently: in part from Jewish ideas and culture dating back 3500 years. Literature quoted in this thesis correctly recognizes that both Servant and Agile Leadership owe their origins to the Judeo-Christian tradition.

This research has developed a new model for PAR that was exercised in a manufacturing setting that will be developed and then owned by the functional teams without ongoing ownership of the researcher.

This research has caused me to touch on philosophy, anthropology, sociology, theology, humanitarianism, morality, and transcendence. Leadership impacts all these elements of what it is to call us human. However, many new and established industrial leaders will never get the opportunity to study at a doctoral level or consider why they lead the way that they do. Thus 20/20 LEADERSHIP is offered as a set of 12 principles that are designed to help inexperienced or established leaders to at least attempt to follow a people-focused leadership that has demonstrated merit.

The new practice-based PAR model was developed and successfully demonstrated as a problem-solving method that focused on empowerment of the individuals and teams with the imperative to remove the researcher as leader and mentor as quickly as possible. Business improvement was confirmed by independently measured increased OEE and improved customer complaint statistics. Sustainment of the model was demonstrated in Company B with the continuation of leadership training using the principles of 20/20 LEADERSHIP by second generation projects in Company C Plant A and a continually improving OEE in Company C Plant B.

My experience is that manufacturing is a constantly changing environment. Therefore, there is considerable challenge in leading a team of collaborators for prolonged periods of time at a single location. This put a large burden on the teams to continue the processes mentored and coached by the researcher sometimes without change readiness or time to train leaders to become acolytes of 20/20 LEADERSHIP and PAR. Nevertheless, the discipline of working with people using 20/20 LEADERSHIP and the use of reflection at every stage of PAR brought about demonstrable business improvement. Would results have been even better if we had had continuity throughout this project? I suggest that they would. Can PAR bring about success despite organizational fluidity? This research suggests it can if leaders adopt a creative and adaptable approach such as I have suggested with the new model of PAR. That these results occurred in the real world of manufacturing demonstrates that modified PAR is a useful method for problem solving in manufacturing. Action research has two focuses: to the organization and its professional practitioners on the one hand, and to the academics on the other. As can be seen from the results of both Company B and Company C, the organizations had measurable benefits in both organizational and personnel growth in addition to adding dollars to the bottom line. As far as the academic goals of this project are concerned, I researched and designed a secularized model for industrial leadership built from Judaism that is unique in the literature.

Final Reflections

In reflecting on the initial passages of this study, I am surprised at the depth of clarity and learning I have achieved in my evolved leadership practice. My practice in the synagogue and the shop floor has changed due to a heightened consciousness of my role in leadership and the power of PAR to drive person-centered and team change. Further to this, relationships, both in work and in the synagogue, have deepened by having an even greater regarded for 20/20 LEADERSHIP principles and tikkun olam, chesed, and tzdacha.

It has been my experience that industrial leaders are rarely prepared for the responsibility that businesses or teams expects of them. This is largely because leaders are not trained and often are not aware of the models that are available to nurture and lead people with respect. The ‘norm’ in the businesses in this research and probably in many others is that the business takes the longest employed individuals and simply puts them in charge, without the tools or skills to do what they were being tasked to do. This lack of fairness is at odds with basic organizational justice. Training leaders with the 20/20 LEADERSHIP model gave them a model with a coach and mentor as a new leadership approach that focused on opportunities to make their people successful and to directly influence the business.

I am particularly gratified that some three years after I left Company B, the Future Leaders Club based on 20/20 LEADERSHIP was being continued and that in Company C, second generation 20/20 LEADERSHIP leaders were starting their own projects using PAR and achieving business improving results. This also showed that 20/20 LEADERSHIP has transferable principles, and it was not just the charisma of the researcher that brought repeatability and on-going business success.

Is the 20/20 LEADERSHIP model so considerably different to the many others that are available? 20/20 LEADERSHIP does have many points of similarity with other leadership models which at its core it predates by several thousands of years, but as a total package is does have differences. Key amongst these is the motivation leaders must find for themselves to sustain leading with 20/20 LEADERSHIP which demands effort and consistency to sustain a credible 20/20 LEADERSHIP practice. Many new pragmatic leadership models in the west are at some level embedded in a Judeo/Christian culture, but what keeps a 20/20 LEADERSHIP leader on track is a core conviction for continuous improvement of personal practice and business success by setting the vision for change and removing the barriers day after day.

The secularized 20/20 LEADERSHIP model has demonstrated that within the limits of this research project that it can build whole engaged people who demonstrate flexibility toward and understanding of change as partners in organizational development and operational excellence. I am certainly aware that I complete this research with more questions at the end of it than I had at the beginning. I see further work on the operationalization and practice of 20/20 LEADERSHIP and the modified model of PAR as being beneficial to bring higher-level academic pursuit within the grasp of leaders who will not have the opportunities from which I have benefited.

I now look to the future and to the application of my learning from this DBA. I look forward to a new role as a consultant and teacher with a focus on preparing organizations though their people to exploit the opportunities of participatory change using 20/20 LEADERSHIP as the vehicle for organizational development and operational excellence. Far too often, change in industry equals external actors, new tools, new ideas and new leaders as a disruption to the community rather than maximizing the potential of what is already available and internal to the organization. 20/20 LEADERSHIP using PAR offers a demonstrated alternative of change from within. Industry is now generally process-focused (TQM, Lean Six Sigma, ISO, etc.) not people-focused (Maslow, 20/20 LEADERSHIP, Rogers, Greenleaf etc). At best then it can only flat line in between changes injected by an external actor, be that the next new idea, leadership book or consultant. Though process is essential in industry, if some of that focus moves from just process to people and those people are engaged corporate citizens then as suggested by Adam Smith (Rosenberg, 1965), and seen in this thesis creativity and innovation will be organic and valuable to business. If people contribute to and thus own the processes, they are far more likely to follow them, than to commit to or sustain the next big idea from the external actor.

In industry, the needs of people often take the back seat and process is often the only focus for sustaining change. In the RAF, we took these same 'ordinary' people and through nurturing and training made them exceptional. They followed very robust and regulated agreed processes, but also 'lived' within a mature organizational culture that naturally drove change through engagement, teams and caring about the individual. A 20/20 LEADERSHIP environment attempts to replicate the idea of growing the organization through its people rather than just process.

Leaders should always attempt to consolidate change to ensure its worth, but completed and measured change is rarely the reality in industry. Changes introduced by these PAR projects and the real world of work are sometimes serial, sometimes parallel, and sometimes a mix of both. Some projects start before the teams are ready, and some do not have time after the change for consolidation to the normative culture. In such complex change, people too often suffer from change fatigue and the next change can be the breaking point. How much better then to at least work with the people to create an inclusive culture of change through a leadership model of respect and inclusion to build consolidation and business resilience. 20/20 LEADERSHIP is such a model that builds bridges between individuals and between individuals and their work in a focused participatory effort of tikkun olam, (social justice), tzadacha, (righteousness) and chesed (acts of loving kindness).

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Appendix 1. Ethics in Participatory Action Research.

Prior to commencement, the research proposal was subject to university research panel approval and ethics panel review. Students at that time were not required to resubmit a version of the ethical clearance form for each data collection exercise undertaken during their research project.

All respondents, teams and leadership were fully briefed on the purpose of this research and gave authority to be included in the research. This included the Vice-Presidents, Director and all General Managers and Heads of Departments that took part in this research. All results of quantitative data were taken back to the leadership of the originating teams and results were only acted upon once that leadership and the teams were content that research conclusions aligned with their real-world experience. For reasons of availability, or the business being sold before the data was analyzed, the RTA data was not taken back to the teams other than their acceptance of the derived 12 principles of 20/20 being accepted as the leadership methodology for the final projects.

Coghlan and Brannick (2010 p. 135) note that the notion of action research can be 'strange' for ethics committees, even quoting an example where an ethics committee turned down a research proposal from an inside action researcher who told the panel "You are telling me now that I cannot do the job, the job I do everyday." This was not my experience, my committee accepted my proposal without question, which may be a function of the fact that students on the Middlesex DBA are directed to use action research. Ethics when carrying out action research 'on' a group of people, are distinctly different to carrying out participatory action research that is 'with' a group of people; where those people are integral to decision making, and there are no issues of confidentiality.

There were ethical dilemmas in how I integrated my role as a senior company employee and a researcher (Coghlan and Brannnick, p. 136) which meant I had to think carefully about how I interacted with my participants. For example, I had to balance letting the teams find their own solutions in their own time with the need for results on behalf of the company. I had to balance letting the team learn through failing with the need of the business who see failure as a loss of time and effort. However, as I assured senior managers were constantly either a part of the teams or part of weekly updates and I was able to discuss these issues with them and without exception they allowed the teams to steer through the issues. A good example of this was the iterative process of RCPS change where both I and the GM could have directed the team to miss two of the iterative steps, but both saw the merit in the teams finding their own way. In this we also helped by one of the mantra of Lean manufacturing that it is, fail forward and fail often.

Gelling and Munn-Giddings, (2011) propose seven requirements as the basis for evaluating the ethics of a research project which I will now comment on in light of my experience in this research.

a. Value. As the context and purpose for all these projects were established by the businesses in which they would be carried out, then the value in terms of establishing the school, improving quality and improving OEE were value added to those businesses.

b. Scientific validity. Several scientific methods were used to generate and asses the validity of this research. These included the quantitative perception survey and the three thematic analyseis. These were supported by the company-derived metrics of OEE and reduced customer complaints. In addition, the quantitative data were taken back to the senior leadership to ensure my interpretation of their data accorded with their real-world experience.

c. Fair participant selection. Participants in this research were almost exclusively those working in the work cells under research. The only exceptions were in areas such as the organizational justice change team in Plant B where a multidisciplinary team was generated from volunteers and supplemented by others that the senior mangers asked as they had a valuable contribution to offer. Where possible, such as the quantitative data collection, 100% of the employees and staff were included thereby avoiding any sampling issues.

d. Favourable risk-benefit ratio. In every case the object of each project was to improve the business, the risk to the business always being greater than if change was not successful.

e. Independent review. The ethics committee accepted my research proposal, and my advisor reviewed my practice throughout the process. In addition, senior leaders supervised activities and were updated on up to a weekly basis. However, in terms of the Gelling and Munn-Giddings, (2011 p. 104) paper I accept that this may not meet the standard of “independent review by an expert, and possibly more than one, with no affiliation to the research project, undertakes a scientific review of the project to ensure that scientific standards are met.” This may be something that the university may like to look at for future students of practitioner DBAs also bearing in mind that changes may have been made since I began this degree in 2013.

f. Informed consent. On-going informed consent is not straight forward for the PAR practitioner who is an internal consultant to the company in regard to consent to “whom” or to “what”. This is further complicated by the fact that the research was also the ‘day job’ of all of the participants and that the nature of PAR meant that direction and redirection of the project was organic, though the end state remained the same. However, data collection was alwaydss proceeded by a detailed explanation of what data would be collected, how it would be collected and what was the aim of the data collection exercise. All data was also anonymous, and it was explained that anonymity would be preserved in report outs to senior leadership and for the purposes of this thesis.

g. Respect for enrolled participants. Humility and respect was at the heart of this research from its core of tikkun olam and in the principles of 20/20 LEADERSHIP. Again, it is important that the research was the day job for the participants and 20/20 leadership and PAR ensured the participants safety and well-being. The findings of the research became the daily improvement in the business and work environment and were also formally presented to senior management up to VP level. As the research was also the day job, participants could not withdraw from the research, but they could have withdrawn from voluntary change teams had they chosen so to do. In coaching sessions issues of confidentiality were raised but all managers knew that as a coach only issues of legality would be shared. No such issues were raised. Again, with the research also being the day job, confidentiality issues were not an issue.

Appendix 2. Jewish Concepts Fundamental to this Research

Mitzvah

For a Jew, it is a mitzvah to engage in tikkun olam, (Freeman, 2017). The simple meaning of the word mitzvah (Hb[16]) is command, however it is more an attitude; it is a blessing to perform a mitzvah from a willing heart with no consideration of any reward. Mitzvah/mitzvot (pl) appears in various forms about 300 times in the Torah, (Freeman, 2017).

The Chinuch, an influential work composed by an anonymous rabbinic author in 13th-century Spain, teaches that attitudes are formed more by what people do than by what they think about, (Freeman, 2017); there are echoes here of the previous discussion on RAF leadership by doing (Grint, 2005) or as Adair (1984) discusses action centred leadership. The Kabbalists of 16th-century Tzfat, particularly Rabbi Yitzchak Luria, taught that mitzvot are devices that reach under the hood of the cosmos to repair it, reorganizing it into a harmonious state that is capable of receiving boundless G-dly light. Ultimately, it is our mitzvot that are responsible for repairing and preparing the world for the messianic era, a time when it will be possible to do all the mitzvot fully, in their ideal context. Chasidic teachings find a deeper meaning in the word mitzvah as a way to directly connect to G-d. There are 613 mitzvot, and therefore, 613 ways to connect to G-d, (Greenburg, 1993). The Rebbe put this best teaching that doing a mitzvah is like doing a favour for G-d, (Chabad, 2017). Thus, when I am focused on the mitzvah of tikkun olam in leadership, my focus is the act of doing something for G-d and not for any reward. This is my motivation (Principle 12) as a Jew and as a Jewish Leader.

As with much in Judaism, the concept of completing a mitzvah has an element of contradiction. In that we must be motivated to do it, but as a natural outworking of our 'natural' behaviour. We must do it, but we must do it gladly. 20/20 LEADERSHIP is a motivator for me as a Jew; I must continue gladly even when having a bad day. So, what would motivate the non-Jew to follow 20/20 LEADERSHIP? Can motivation be translated into a list of leadership concepts? I think not. The non-Jewish leader will have to find their own motivation (Principle 12) or as described in, (Bennis, 1989) the passion for themselves. 20/20 LEADERSHIP could become the heart of an individual's own moral code when they discover that motivation or passion for themselves.

[16] Hb = Hebrew

Tikkun Olam.

An old man was walking along a beach at dawn and noticed a young man picking up starfish that had been stranded by the outgoing tide. The young man was throwing the starfish back into the sea one at a time. "What are you doing?" said the old man, "You will not be able to save them all. How can you make a difference?" "To this one," said the young man, "it will make a difference" (Sacks, 2005). In Judaism, this core concept is called tikkun olam, which is often translated as social justice, building bridges, doing the right thing or healing a fractured world. Tikkun olam is a rabbinic concept[17] central to Judaism and encompasses the moral and spiritual dimensions of Jewish life. Tikkun olam is translated in the Mishna (ca. 200 CE), as 'action in the interest of public policy'. This was particularly when it came to the socially disadvantaged, obliging those with the resource to care for those with little or no resource of their own. Jewish responsibility is to act for those who do not have the voice or position to be able to act for themselves.

Since the holocaust, tikkun olam has come to mean social action and the pursuit of social justice, (Kahan, 2012), and is an imperative that inspires and drives Jews to make whole a broken world that does not discriminate between that of the Jew and the gentile. Rabbinic Judaism teaches that G-d created an imperfect world to give us the opportunity to collaborate with G-d to complete a perfect creation. This need to bring completeness, to heal, to repair, to build bridges, to right wrongs, and to do the 'right thing' is always at the core of even minimal Jewish practice – and this Jewish leader's practice.

Jews are commanded by Torah to live with a willing spirit when carrying out tikkun olam. Importantly, this core expression of Judaism is not restricted to be just centred on our own Jewish community, but to everyone irrespective of religion or of no religion.

Though Jews are called 'G-d's chosen people,' Torah teaches us that we are no better than the outcasts of society (Amos 9:7). So, a Jew lives to make things better for all people; this must then include all those, Jew and non-Jew that Jews are called to lead. In industry, leading with tikkun olam will make followers more

17 As the rabbis were required to face a new reality, that of Judaism without a Temple 70 CE (to serve as the center of teaching and study), there was a flurry of legal discourse that the old system of oral scholarship could not be maintained. It is during this period that rabbinic discourse began to be recorded in writing, Strack (2018). This is the beginning of the rabbinic period taking over from the second temple period.

complete as individuals and so more effective for the business. This is echoed by McWilliams and Siegal (2011) and Organ (1988), who both suggest that individuals who are treated justly will be engaged and care about the business taking on ethical work-place responsibility and becoming true corporate citizens.

Tikkun olam emphasizes nurturing alternative constructions that aim to challenge the world as it is, (Kahan, 2012). Tikkun olam shows that changing the world is about finding intelligent ways to break existing rules when the outcome is for the greater good. Industrial leadership based in repairing and healing from the focus of a spiritual paradigm is certainly an alternative construct. Tikkun olam may also be a remedy to dissatisfaction with a status quo that does not meet the needs of the individual. This dissatisfaction needs 'healing' by a leader who puts values and people before dollars and political polarization. Tikkun olam as a sacred core of 20/20 LEADERSHIP focuses on long-term transcendent values, tangible vision, personal goals, and positive impact on the world around us with individual wholeness (Sacks, 2016).

Chesed.

Chesed (חֶסֶד) another core Jewish value has no direct English translation so is traditionally translated as kindness or grace (Chabad, 2019). It is more usually translated as loving kindness though it means more than this as it includes mercy, steadfast love, and loyalty from the giver to the receiver, (Snaith, 1951). Smith (2020) says that kindness is an often-forgotten essential leadership skill and Heisler (2020) states from a meta study that kindness is the most important leadership trait whilst Baker and O'Malley (2008) state that leaders who lead with kindness consistently get superior results. Importantly, a Gamara passage on chesed is in the daily prayer book. This passage reads, "These are the deeds (miztvot) that yield immediate friut and continue to yield fruit in time to come" (Harlow, 2002 p.5), giving honor to parents, studying Torah and "doing deeds of loving kindness ". Thus, kindness be it in a 3500-year-old tradition or in 2020 business situations is key to individual, team and business success.

Chesed is found in the book of Psalms 23 times and in Hosea 2:19 where it is translated as G-d's love for Israel. Chesed is also translated in Psalms as mercy, goodness, and great kindness in G-d's attitude to humankind. In (Psalm 141:5), chesed is used to describe man's attitude to man, translated as 'friendly' in terms of relationship. In the development of the 20/20 LEADERSHIP model, chesed is used where there is also a level of relationship between the parties concerned. The relationship between G-d and Israel is a theological metaphor for that between Israel and the world. In my estimation and that of Harlow (2002), chesed can also be used to describe the relationship between a leader and their followers. For a Jew, one can see the compulsion through chesed to give tzadacha and act with tikkun olam, to have a compulsion to give within a framework of social justice for the benefit of any that can be impacted. Chesed then is an important mitzvot for Jews and must be central to a Jewish model for leadership. Chesed can be demonstrated daily in 20/20 LEADERSHIP by treating employees with kindness (Principle 3) and by looking for opportunities to engage with them (Principle 2), to nurture them (Principle 1), to help them in their journey (Principle 4) when possible and within what is ethically responsible in a work environment.

Some Jews would say that the sustaining factor for Judaism is the divine love and leadership of G-d (Godman, 2019). That being the case, one would think that Jewish leadership would shun any model that allows mere mortals to be leaders. Jewish leaders operating with tzdacha, chesed, tikkun olam and mitzvot are disproportionate in the USA when compared to non-Jews as the owners of multi-billion-dollar corporations. Whilst Jews represent only 1.7% of the population in the USA, Jewish business billionaires represent 20% of US business billionaires (Appendix 8). Why is this and what part has leadership played in sustaining Judaism for 3500 years? What can we learn from Judaism to promote leadership in modern organizations? Though not regarded as one of the oldest cultures, with both China and Egypt recorded as being older, Judaism did not have the advantage of power or prestige to ensure its survival. In fact, for most of their history, Jews have taken on the role of the oppressed. So Jewish leaders have not generally led from a position of power but rather from the community core values of their Jewish faith.

Tzdacha.

Another core principle that deeply influences Jewish Leadership is Tzdacha (Hb. צדקה). Tzdacha literally translated means justice and righteous giving but is now more commonly translated as charity, though it is a different concept from the modern secular idea of charity i.e., giving money. Burg (2016) describes a giving leader as one who operates, day-to-day and moment to moment, from the perspective of using their leadership position as a way to help build, promote, enhance, and prosper the enterprise and its people before their own ambition or kudos. Tzadacha is an obligation for a Jew whereas charity is voluntary and can be given as a result of many motivations from guilt, to just doing something that makes one feel good or just relief as in the expression, “There but for the grace of G-d go I.” Tzdacha is also a mitzvah, which must be performed regardless of financial standing. We give from what we have, and even Jews of moderate means will regularly give tzdacha. Thus, leaders operating 20/20 LEADERSHIP give of themselves not because they have to from an external demand, but because they must from an internal motivation.

The US Business Week 2006 publication the 'Fifty Most Generous American Philanthropists' contains at least fifteen Jews (30%) when Jews are only 1.7% of the population. The Chronicle of Philanthropy's list of the top fifty charitable donors in 2008 included 16 Jews. Similarly, a 2003 study (reported in the Jewish Journal) found that 24.5% of all 'mega-donors' (people who donate more than $10 million a year to charity) are Jewish. So why is this so disproportionate? This is simply that Jews give tzdacha because they must.

As with all core concepts of Judaism, the meaning and understanding of tzadacha continues to develop. Nowadays, rather than just involving money it includes all acts of giving. A highly publicized example of tzadacha in the commercial world expressed in a core cultural concept is the customer charter of 'The Home Depot' Appendix 9. The Home Depot is the largest DIY chain in the USA and was founded by two Jews, Arthur Blank and Bernie Marcus. Marcus talks about how they enshrined tzadacha from the first days of The Home Depot (Marcus, 2015). A key example of The Home Depot enshrining tzadacha is how they open their stores to all emergency workers in times of crisis, such as hurricanes, fires, floods, and tornados. These emergency workers can then take whatever they need from the store without question and free of charge, to help those in need.

The Talmud describes different levels of tzadacha, and Maimonides (Rich, 2012) organizes tzadacha into a prioritized list from the most meritorious to the least meritorious. This list includes giving to enable the recipient to become self-reliant, giving anonymously, giving before being asked, and lastly giving after being asked. This righteous giving can include time, education, mentoring, understanding, and caring. In Judaism, the concept of giving to enable an individual to be self-reliant is the highest calling and bringing this to industrial leadership will be a true crossover from Judaism to industry. Thus, the 20/20 LEADERSHIP leader must be a giving person, an enabler who focuses on the follower becoming complete, enriched, successful and self-reliant. As such, an individual will be a force multiplier in business.

Appendix 3. Data Collected at Jewish Leaders Focus Group

Question 1. How did we get to our current leadership Model?

The presidents explained that the synagogue broke away from an established Conservative synagogue in 1962, which had been founded by "rich Jews in 1854". The established synagogue had a Rabbi and Cantor on salary, annual subscriptions had to be paid to be a member of the synagogue, tickets had to be purchased for the most important services of High Holy Days, and committee posts were purchased; this was typical for the time. Services were all male led, only men could read Torah, and girls were not permitted to have a bat mitzvah. The breakaway group was made up of five, 20-year-old couples who objected to this focus on money. They met initially in the back room of a bank and then in an Episcopal Church. They were totally egalitarian and initially were against even having a Rabbi or becoming a community any larger that about 50 people. Their focus was to build an intimate egalitarian Jewish community, a Kehila open to all social, economic, and sexual demographics. This new synagogue was founded on a sense of social justice to allow all Jews to be able to worship together irrespective of the size of their wallet.

Though they now do have a rabbi, they have never had a professional cantor and membership dues are still voluntary (ironically, they are now the most financially stable congregation in the town). Congregants of any gender can take turns in leading services and an egalitarian executive board are responsible for the 'business' of running the synagogue.

A K-A. Reflective Practice.

The synagogue leadership had developed from a strong set of egalitarian values and a deep concern that money and 'professional' leadership did not become the core of the synagogue. When looking at the leadership of the patriarchs in the Torah, they too were not traditional or professional leaders, neither did they come from the ranks of the rich and famous. This is an important reflection on who can become a leader in any group whether it is secular or sacred.

Question 2: What is Unique to Jewish Leadership?

H. explained that leadership in any organization is 'like a dance', with the leader constantly adapting to people, situations, and circumstances. This was his experience leading both in and outside of synagogue leadership. H. explained that in his opinion his leadership of Jews was the same as his leadership of anyone else.

A K-A. Reflection. This is important in that how H. says how he leads Jews is the same as he (as a Jew) leads non-Jews and promoted further questions to illicit deeper meaning. H did not mean that leading Jews is the same as leading non-Jews but how he from his cultural perspective leads Jews, is the same as he leads non-Jews. This is also my experience that I confirmed, outside of this study with a comparative empirical study using the Authentic Leadership Questionnaire (Avolio, 2007) to see if Jews and non-Jews saw me as the same authentic leader in the two separate environments. There was no statistical difference between the responses from the faith or secular organizations of my leadership.

Another past president Hy, said that whatever the situation, "Find good human ways to lead". When asked what that means, he stated that one has to "do the right thing to meet the needs of people in the synagogue and in practical ways." This is an early example for me of how the leaders were carrying their faith into 'human' ways to lead, meeting the needs of the people, in the same ways in whichever environment.

A K-A Reflective Practice. Aug 2020.

Reviewing this section some 4 years after these interviews, I missed an opportunity here in not digging more deeply into the experience of the past-presidents (they were mostly in their 70's and 80's), with regard to any conscious secularization or operationalization that they could remember they had considered. Had their secularization and operationalization been conscious or organic? How much of my practice is as discussed by Beddoes-Jones (2011) as the chameleon adapting my style to meet the needs of those around me whilst staying true to my core values? I would like to think I a chameleon with integrity.

"A leader must be true to a core set of values which are clearly communicated. A naïve reading of this point would suggest that all a leader has to do is to be their authentic self. But that's not enough… Being authentic is not about being the same all the time. The most effective leaders are authentic chameleons. The chameleon always adapts to context but remains a chameleon." (Beddoes-Jones, 2011)

This theme that the Jewish leaders felt that they led in the same way as synagogue presidents as they did in their professional secular lives was interesting. As discussions continued, they stated that the reason they led the same in all areas of their lives was that they were Jews first. They had been brought up culturally and schooled as Jews with robust Jewish core values including tikkun olam, chesed and tzdacha whilst wrapped in Jewish history, culture and of course the principles of Torah in a close-knit Jewish community. This is also key to why we had all been nominated to become presidents in the first place. We all lived our lives as Jews first and from that demonstration, had then been selected to become Jewish Leaders.

Another common response on which all the presidents agreed was that Jewish leadership must start in the home. This speaks to a core cultural concept of Judaism with its traditions and festivals practiced more in the home than the synagogue. It is therefore a natural progression to carry Judaism from the home to the synagogue and from the Jewish community into secular life and business.

<u>Question 3: What went well in their period of presidency and what should not be repeated?</u>

V felt strongly that one-to-one contact (Principle 1) was key to early success until the synagogue grew so large that this became too difficult. In those early days, everyone knew everyone else. "We spent so much time in each other's homes." For my tenure, I was encouraged to get out of the synagogue into congregant's homes and get to know congregants on a one-to-one basis, by talking to people and building personal relationships.

A K-A. Reflective Practice.

This is a great piece of advice to any leader; get to know your people, build relationships and spend time listening. This sharing of time in each other's homes was also an opportunity for mentoring and sharing the infant synagogue's culture. These are principles to carry forward into 20/20 LEADERSHIP.

Ab spoke passionately about those early days when each board member had specific responsibility for a group of congregants. In the 1960s and 1970s, they called this Personal Board Contact (PBC). "For many years, each board member had the responsibility to maintain contact with 10 or so congregants." When the synagogue grew past 150 people, this had become difficult, and it was a big regret that this personal touch had been lost. Regarding Friday night Oneg Shabbat (i.e., the Friday night service that begins with sharing a buffet), M said, "This used to have a prolonged time for schmoozing. We are now too busy and are just in and out of the synagogue for services. We should try to make time to just build deep and lasting relationships." Ab said, "Something that also worked very well was 'Home makeover – Jewish Edition'". This showed young couples how to build a Jewish home, both the artefacts and the practice. These times working together built relationships. "When you become President of the synagogue, you should bring this back."

Repeatedly they stated that leaders must focus on building relationships. This is also an opportunity to identify new leaders and was how I was first identified for leadership as the Men's Group President and later as Executive Vice President.

A K-A. Reflective Practice.

Leaders being responsible for building strong relationships with individuals is key to building a congregation and a team. Leaders must own and develop organizational culture and consciously apply mentoring when new families or team members join a new group. This is an almost 'pastoral role' for leadership that I will develop later in this thesis. Many joined our synagogue who had not been to any synagogue for some time as they felt disenfranchised. In the 20/20 LEADERSHIP model, it will be important that it builds truly inclusive teams and makes individuals feel that they are purposely included.

This reinforces the importance of knowing each congregant, team or employee and then mentoring them, so they feel a part of the team or community.

<u>Question 4: What is the single biggest lesson learned by each former President?</u>

The consensus was that the biggest lesson learned was that leaders have to present the 'why and how' to the congregation. People need to be informed about how and why leadership make a particular decision, and not just given direction. Participation is essential not just direction. (This is a natural fit for PAR.) In addition, the synagogue needs to return as the social centre of the community and not just the location for religious practice.

JB: "It is now difficult to get enough of the synagogue volunteer posts to be filled. Volunteerism is organic and comes out of relationships. We need to change back, to get back to building relationships (Principle 1) in the synagogue." So much more is now available to Jews than just a few decades ago.

A K-A. Reflective Practice.

So many other social and sport opportunities are now available to Jews compared to 50 years ago. In the 1960s, Jews lived within walking distance of the synagogue for two main reasons. Firstly, it was prohibited to drive on Shabbat, and secondly, in many towns into the 1970s, Jews were not welcomed outside of Jewish 'areas.' Jews also could only have certain jobs and had quotas for university and restrictions on which courses were available. Maintaining volunteerism and understanding what promotes volunteerism, will be important in any team.

Relationships based on volunteerism were the heart of synagogue life. How do we build community and relationships when congregants live up to 50 miles or more apart? This is not the situation in business where we can form communities under one roof where we work together 50 or more hours per week? How do we build a community of workers who invest themselves in the business and desire to become volunteers and corporate citizens?

A K-A. Reflective Practice.

There is a core of volunteers in the synagogue that we continue to recycle through leadership roles. These individuals who have consistently provided for the life of the synagogue, want to hand over to younger people but are also fiercely jealous of maintaining the quality of leadership. In industry the old guard want to hold onto power but many of the newer members just do not want the job. In both areas the elders need to be demonstrating that leadership is a worthwhile pursuit whilst training successors through training, mentoring and coaching.

Leadership can be onerous, but we must make it appealing. We must put Jewish leadership back at the centre of the synagogue. We need new faces in leadership roles. We need people who want to engage with what is more than just a social club. We used to have great social functions, but they were linked to the Jewish calendar and Jewish religious services. Functions are now just for entertainment.

A K-A. Reflective Practice.

In both industry and the synagogue, we need to identify leaders and discover leadership talent. There has to be a balance between core values and adaptability to be able to attract young Jews to engage. H is also very keen to attract non-Jews into our community as long as they accept our core values. 20/20 LEADERSHIP needs to be appealing, be centred in a core values leadership model, and those core values must be central, appealing but adaptable.

Question 5: What should we never change?

H was adamant that we never change member-led services. A and H also said we should not extend the authority of paid leadership as the people must lead the synagogue. Also, we should resist turning volunteer positions into paid positions. Volunteerism had been the genesis of the synagogue and it must remain so.

A K-A. Reflective Practice.

In industry we must seek to grow leaders from the body of the work force, but we should also recognize when we do not have individuals who are ready for the responsibility and then recruit expertise from outside. It is essential to maintain a focus on business.

Concluding Thoughts. Although the Presidents' group participants are progressive and egalitarian, they hold on to the core values of Jewish life based on ritual and volunteer leadership. They promote that Jewish leadership must begin in the home, and not be restricted to the synagogue. They lead in the same way as synagogue presidents as they do in their secular employment. Though I was not able to poll their employees, this common view was not surprising as their leadership came out of who they are at a deep Jewish cultural level.

Decision-making has to be just and as a leader it will be vital that I explain the 'why' of a decision. We should keep leadership voluntary, ensuring that leadership needs to be Jewish first, and though we can adapt and change, we must hold onto our core values, planning for consistency but also flexibility. New leaders come from relationships, and the older members must reach out to younger and newer members.

Appendix 4: The Bob Project. A Case Study and Foundational Experience in Industrial Leadership

Bob was a paper machine mechanic that had been with the company for over 20 years. He was responsible for maintaining the main conveyor to the paper pulper on scheduled maintenance every six weeks. When I was first introduced to Bob, I asked him what he did. He explained that "I am the guy that does all the shit jobs that no one else wants to do (sic)." Bob was not the easiest mechanic to get along with and was given a wide berth by many of his co-workers. For me he was a valuable team member who had over 20 years' experience, he was an asset that needed to become a part of the team and not just be left on the edge of the team. I immediately determined to work with Bob and bring him into the team, coach him to a place where he had a more positive attitude and find out how to get him to use his talents as a fully skilled millwright who in business terms was also paid at the top end of the hourly rate. In doing so I could make life better for Bob and he would be more productive for the business.

The feed of one-ton bales of wastepaper into the recycling process to make new paper had a problem. The paper bales moved on an inclined walking floor of 19° to deliver the bales onto the pulper conveyor at the start of the paper making process. The bales were slipping down the incline causing gaps of up to 18 inches between bales which meant reducing the continuity of the process feed, consequently we were losing the equivalent of one day's production every month. This problem had impacted production for almost 10 years.

I had been the maintenance manager for about 3 months when I spoke with Bob about the conveyor problem. During that time, I had sat with Bob on several occasions to eat lunch, to ask his advice about machine faults. I had learnt more about his skill set, his experience and what he would like to do in the plant. Bob explained that, "When 'they' put in the walking floor ten years previously, it was installed incorrectly as it was designed to operate horizontally not on an angle. The slippage was a direct result of this incorrect installation." However, 'they' had done it this way "to avoid having to build a 19° ramp to get the bales to the conveyor". As an NLP trained coach, I understand that the language used in a conversation cannot be overlooked and Bob's use of 'they' when speaking about management was indicative of his feeling about his leadership and represented a barrier (Principle 8) between him and his leadership.

Bob explained that he had designed the solution to the bale feed problem 10 years previously but that "'They' will not listen to me, 'they' never do, because I am 'just' a mechanic." I had by now heard several of the technicians using 'they' for management. This suggested another opportunity (Principle 2) to work with each member of the department to bring all the mechanics together to work as a team. I reviewed Bob's plan, saw its merit and decided to approach the General Manger to gain his agreement to proceed with Bob’s plan. The General Manager agreed with my appraisal of Bob’s plan subject to preparing a costed project plan. We calculated the plan would cost $28,000 with a Return On Investment (ROI) in 3 just months. Business requirement was ROI of less than 18 months. At this stage, the plans would have usually gone to one of my engineers. I decided that I wanted Bob to be the project manager: it was his plan; it was well thought through and the design was complete. I felt this would show respect (Principle 9) to Bob and facilitate his integration into the team. I did have the engineers check the arithmetic behind the design for structural loading etc. I therefore asked Bob if he would take on the job of Project Leader and assemble a team as the leader to put his idea into production. He was first shocked and then exceptionally pleased that he had been given the responsibility. He assembled his project team with me, the production manager, an engineer, and other mechanics as participants on the project. The team refined the plan, purchased the materials, prefabricated the parts and over three scheduled maintenance outages they executed the plan.

The project led by Bob was completed on time and on budget. As soon as the walking floor and conveyor started up, we saw that the gaps in feed had been eliminated. This was my first participative project as a civilian manager. By respecting (Principle 9) Bob's experience and understanding his vison we improved business. I as the leader removed the barrier (Principle 8) of management not listening to Bob. I took responsibility for the plan with the GM and approved the $28K out of my maintenance budget. As a result, Bob was a far more engaged employee and brought more ideas and led other projects as an advocate of team led continuous improvement (Principle). I learnt several lessons from this collaboration. I cannot know everything and need to practice humility (Principle 9) using the ideas from all levels of the company to improve business. In giving Bob a fair hearing, respecting what he had to say working with him and nurturing his talents (Principle 7) he became a business enabler (Principle 7).

A K-A Reflective Practice:

This was a foundational project for me and demonstrated why my (20/20 LEADERSHIP) approach with Bob had been able to illicit a result, where that of previous leaders had not. From this I learnt that a little humility goes a long way in showing a discouraged employee respect. That in taking time to build a relationship (Principle 2) with Bob I was creating an invested and engaged employee. Every interaction I had with Bob was an opportunity to coach him and for him to teach me more about the paper industry. I learned about building relationships with civilians who came from an entirely different culture to that which had been my experience. These lessons began my thinking about how I lead and could my way of leadership be quantified and taught to others.

These lessons were the germination of several 20/20 LEADERSHIP principles namely, to look for opportunities to work with the team which became 20/20 LEADERSHIP (Principle 2), to consider people as business enablers (Principle 3), to model positive behaviors (Principle 6), to be pragmatic and remove barriers, (Principle 8) and to demonstrate humility and respect over the long haul, (Principle 4), (Principle 9). Though this is a particularly useful example, it is only one of many from those formative years as a civilian after completion of my RAF service.

Appendix 5 . Definitions for the Plant B Preliminary Project

Table 9, details specific definitions used in the Plant B preliminary project

Customer Credits.	Dollars returned to the customer for defective product
General Manager (GM)	The top of the plant hierarchy.
Lean Six Sigma Green Belt (LSSGB).	Systemic problem-solving process using methodical and statistical methods for continuous process improvement. Practitioners attain 'belts' based on training and experience.
Machine Centre-lining.	Process of placing gauging on all adjustable elements of the production machine to reduce variability and build in precision during the set-up of the machine prior to a production run.
Quality Assurance (QA).	An end-to-end process building quality into a product from acceptance of raw material by certificate of authenticity though to meeting customer acceptance.
Quality Control (QC).	Points of inspection of finished product before passing product to the customer.
Quality Leadership Team (QLT)	Quality team of leadership
Quality Management System (QMS).	End-to-end management of a process to assure that quality is built in at every stage to assure the final product meets the customer specification.
Quality Working Group (QWG)	Quality team of supervisors.
Root Cause Problem Solving (RCPS).	Methodical process for reducing problems to the true root cause and then designing sustainable actions to ensure there is no reoccurrence under the same set of circumstances.
Transition Point Auditing (TPA).	An inspection process at points of transition between manufacturing process where defects are detected before input to the next process.

Table 9. Plant B Preliminary Project Definitions

Appendix 6. Leadership Timeline

The purpose of the leadership timeline, Table 10, was to detail a chronology of my leadership experiences to understand what influences my leadership today. In building this timeline I was somewhat surprised that my leadership began at the age of seven and has become such a core of the make-up of who I am. Even when not required of me, I have gravitated toward opportunities for leadership. Academic oversight has been a considerable grounding process to enable me to use a variety of tools and skills to understand some of the pitfalls of leadership. I have also gravitated toward opportunities to teach leadership and pass on my experience to others.

Year	Age	Event	Thoughts
1969	7	Became care giver to single parent	My first experience of responsibility for another person. Highly formative.
1974	12	Became Patrol Leader Scouts	I began scouts at age 10. At 15 I was the district senior patrol leader with responsibility for almost 2000 scouts. First leadership role. Looking back a great experience of enjoying leadership.
1976	14	Became Senior Patrol Leader Scouts	Recognition at an early age from a leader for whom I had respect.
1976	14	Became head chorister	Selected for a leadership role which was a learning experience and fun.

1977	15	Became the district Senior Patrol Leader.	Leading on a district board with adults representing 2000 scouts.
1977	15	Became a Chief Scout.	Recognition for training and leading.
1978	16	Joined the RAF.	At a time when recruiting was very low, I only got my place as I was a Chief Scout.
1978	16	RAF Swinderby Basic Training.	We took turns as a leader and follower to learn how 'to do' leadership.
1979	17	1st operational tour in Belfast NI.	Saw the best and worst of people.
1982	20	Youth Leader.	This was a great opportunity working with mostly disadvantaged kids in the area of Barry docks. I was able to adapt my military leadership to show these kids that what they had did not define who they could be.
1986	24	Promoted to Corporal.	First exposure to formal Leadership Training at RAF Hereford (Grint, 2005). Trained through follower/leader positions. Again, this was fun.
1986	24	MRF Commander.	Anti-terrorist force commander leading a team against the IRA on main- land UK.

1986	24	Birth of 1st daughter.	Parenthood brought about a step change in considering the needs of others before my own.
1988	26	Instructor at RAF technical School.	Introduced student-centered-learning to RAF Halton even before I knew about the work of Carl Rogers.
1989	27	Scout Leader.	Opportunity to teach leadership.
1990	28	Birth of Twins.	Parenthood.
1992	30	Graduated from Officer Training School (Flight Leader).	RAF Cranwell – Officer leadership Training
1992	30	HNC Electrical and Electronic Engineering.	First non-military management training
1993	31	1st Officer posting RAF Scampton and Unit move to Sealand.	1st Officer command of over 150 airman and NCOs. Complex change management and relocation of the facility.
1996	34	Posted to RAG Bruggen Germany.	Flight Commander and Project Manager (PM) for ECCM and TIALD in Gulf war.
1998	36	Posted to GEC Marconi.	PM ECR 90 Typhoon radar.
2000	38	Promoted to Sqn Ldr and posted to RAF Oman.	Lead the MOU for RAF(O) Jaguar upgrade on behalf of Sec of State for Defense George Roberts

2001	39	Posted to RAF Coningsby.	Sqn Commander for 200 airman and officers in support of 48 Tornado aircraft and infrastructure changes for ILS and introduction of Eurofighter Typhoon.
2001	39	Staff Training for promotion to Sqn Ldr.	RMCS Shrivenham and Cranfield. First exposure to higher level leadership theory.
2002	40	Promoted to Wg Cdr and posted to Kosovo NATO Spokesman.	Diverse team of 38 personnel for 15 nations. Cultural overlay as well as mission critical decision making.
2004	42	Posted to Lockheed Martin Aerospace.	PM for introduction on C130J into service – Iraq and Afghanistan. Ran an international team of C130J military customers.
2005	43	BSc Engineering Management.	First exposure to academic leadership training.
2006	44	Senior Avionics Officer for Nimrod R1 and MR2.	More management than leadership.
2007	45	MA (WBIS) Management and Leadership.	Graduate degree in leadership (change management).
2007	45	Retired RAF moved to USA.	
2009	47	OEM Systems Manager.	First civilian management job.
2010	48	Reliability Manager Company A.	Second civilian Management job.

2012	50	Maintenance Manager Company A.	Promotion.
2012	50	Synagogue Men's Club President and Board Member.	
2013	51	Corporate Reliability Engineer Company B.	Promotion. Third civilian Management job.
2014	52	Reliability and maintenance Engineering manager. Company B.	
2015	53	Synagogue Executive Vice President.	Responsible for Strategic Plan.
2015	53	Designed and Trained FLC.	First opportunity to teach 20/20 LEADERSHIP. Company B.
2015	53	Quality Manager.	Company B.
2016	54	Synagogue Strategic Planning Implementation Leader.	
2017	55	Corporate Continuous Improvement manager.	Atlanta. Company C.
2018	55	Designed and implemented industrial 1st Line Leader Training.	Second opportunity to teach FLP.
2018	55	Member of Synagogue Governance Committee.	Setting strategic direction for governance of the synagogue.
2018	56	Asked to take on Synagogue Presidency.	Declined due to moving back to UK within 2 years.
2019	56	Designed and implemented Authentic Leadership Training at Company C. (FLP)	Refined training. Achieved business success.

Table 10. Leadership Timeline.

A K-A. Reflective Practice. March 2018.

Doing this exercise is the first time I have listed my key leadership posts. It is surprising to me how much experience I have been able to amass but such was the nature of military life and average postings of just two years. Not only have I learned and practiced leadership, but I also reflect on how much enjoyment I have had in leadership positions. July 2016

Although I did meet great people, I have become more conscious of how I enabled their success by how I lead even before I was exposed to some of the high-level theory or understood the motivations behind what I was thinking and doing. I do not believe I am a 'natural leader;' I find leadership a daily challenge, but often have experienced leadership as genuinely enjoyable and fulfilling. However, overcoming my introversion to lead others is often all I need to achieve the larger goal of helping those others to be successful and thus making the mission or business successful. I have had to learn to build my own bridges and address my internal conflict for the benefit of others. This self-reflection has been essential, and I need to continue to nurture my own self-awareness to be more useful to others. If I can retire to some quite corner to 'recharge my batteries' I can cope with having to appear as the extrovert who can be the coach, mentor, and cheerleader, which though exhausting is rewarding.

A K-A. Reflective Practice. December 2018.

I often underestimate my worth and experience, but such is the nature of the INFJ, authentic leader for whom the idea and service is more important than self-congratulation. However, on reflection I should value what I can bring to industry and synagogue leadership and what I have to say about 'new' leadership, transcendent leadership, authenticity, and the value of reflection on lived experience to build leadership praxis.

Appendix 7. Diagram to Show Leadership Influences

Figure 23. captures the historic social, cultural, and religious influences that impact my leadership today. The larger the circle, the larger the influence. Not surprisingly, faith has the biggest influence followed by 30 years in the RAF including senior leadership followed by industrial leadership experience.

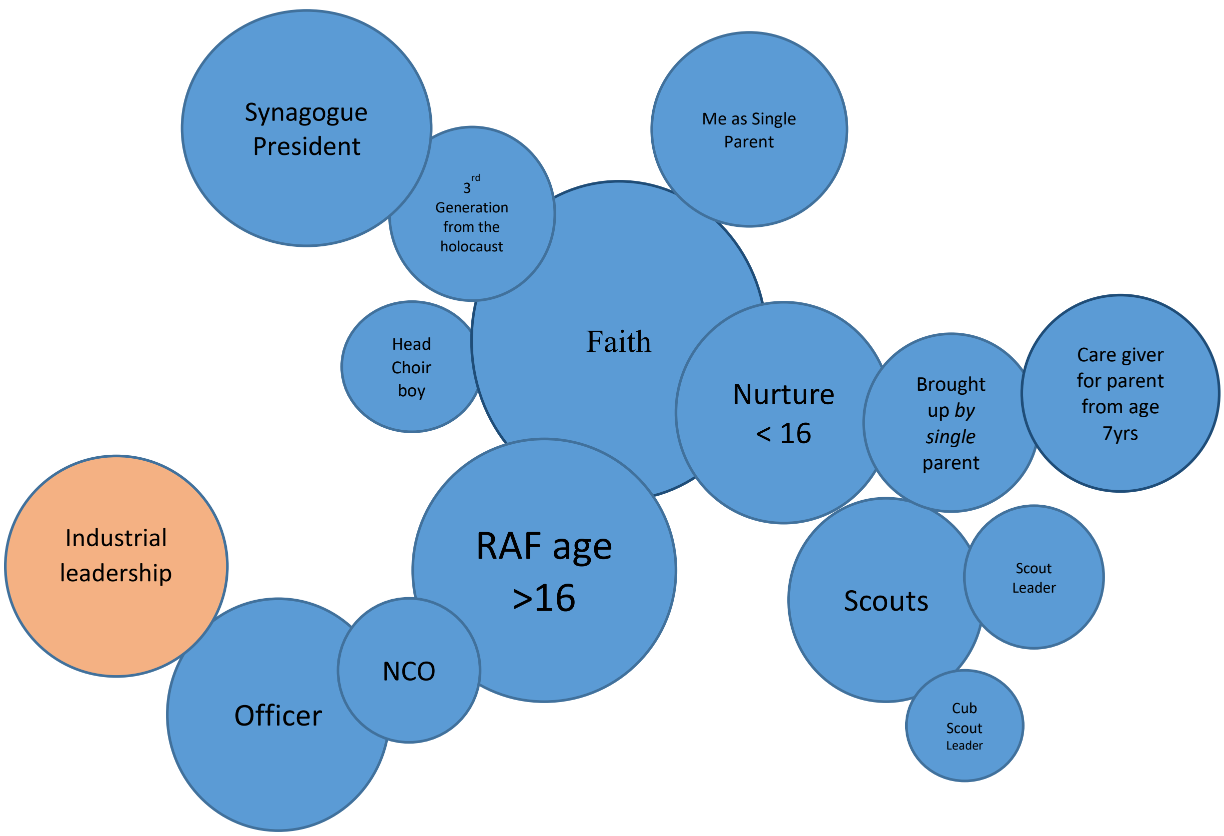


Figure 23. Leadership Influences

I had not considered my growth after the RAF as it was not the positive experience to me that the RAF had been. I found military life easy and directly aligned to my values, as military life was based on fairness, equality, justice, and order. These were already my established faith model and core social values. So military order was just an extension of my formative years. I have often found civilian work not to be a growth opportunity and have been 'hemmed-in' by restrictive practice, lack of respect and a focus on the $ and not the people. This too has defined me and was a major driver in me undertaking this study and wanting to improve the environment for those that I am privileged to lead.

My first experience of double standards, hidden agendas, and double speak was when I joined the civilian world at the age of 45, where working hard and exceeding what was required was no longer a guarantee of success. Where one week, one was praised for outstanding work only to be made redundant the following week. As of June 2019, this has occurred 3 times in 12 years. In the civilian industrial world, I found out that effort, unconditional trust, and loyalty count for little. This was not so in the RAF. This made me far more conscious about the openness of my intention and how I wanted to operate.

Appendix 8. Jewish Philanthropy and Population Percentages in the USA

American Jews are immigrants who arrived without money or positions due to East European pogroms starting in the 1850s accelerating from the 1880s and raised to the maximum levels in the 1930 and post holocaust in the 1940. Most of the Jewish wealth in the USA is self-made and has been accumulated in just two generations (Alford, 2013). Figure 24, shows the Growth of the Jewish population in America.

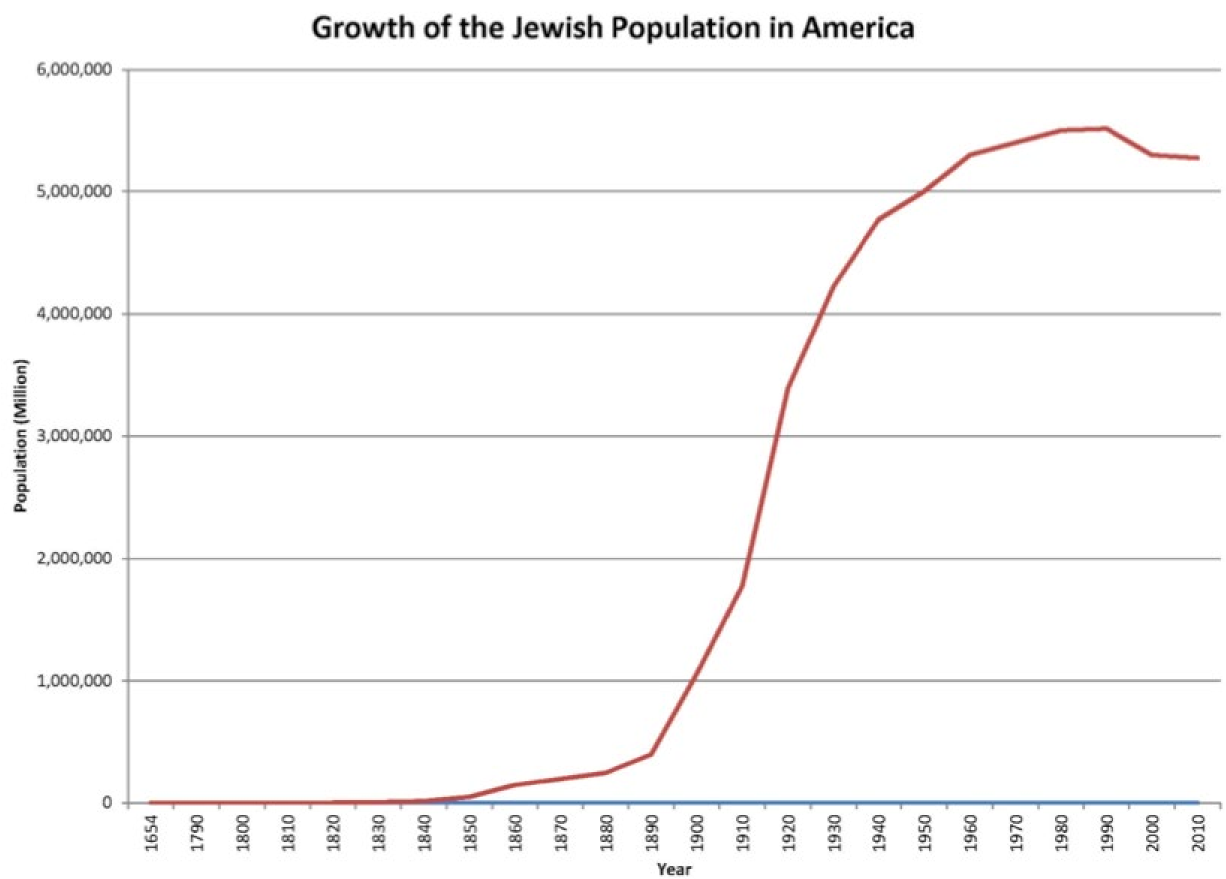


Figure 24. Growth of the USA Jewish Population in America 1654 to 2010.

According to a 2014 study by the Pew Research Center, Jews ranked as the most financially successful religious group in the United States, with 44% of Jews living in households with incomes of at least \$100,000, followed by Hindu (36%), Episcopalians (35%), and Presbyterians (32%). Modern Orthodox Jews had a median household income of $158,000, while other Jews had a median household income of $185,000, compared to the American median household income of $59,000 in the same period.

According to the same study there is correlation between education and income, about 77% of American Hindus have an undergraduate degree, followed by Jews (59%), Episcopalians (56%), and Presbyterians (47%). World population in 2012 was 7.167 Billion of which Jews were 14.4 million. So, Jews are 0.2% of the world population but out of world richest 50 billionaires 9 are Jewish i.e. 20% (Blatt, 2018).

Arthur Blank and Bernie Marcus are Jew, each have an individual wealth of around $5B and are both self-made men having founded the Home Depot the largest DIY store in the USA with a revenue of $100B. Both are major philanthropists (Appendix 10). They both took their Judaism into their business with the customer's charter in Home Depot. Amongst other businesses Blank now owns the Atlanta Falcons in the newest NFA stadium in the USA and does so with a Jewish focus. At the entrance to the stadium is the quote Figure 25, from the 1st century (CE) Rav. Hillel the Elder. Both Blank and Marcus have been awarded the highest order in the State of Georgia for their Business leadership and philanthropy. They have both joined Bill Gates charity with the intent of giving away their wealth before they die. This demonstrates tzadacha, tikkun olam and chesed as at the highest level as both business and community leaders.

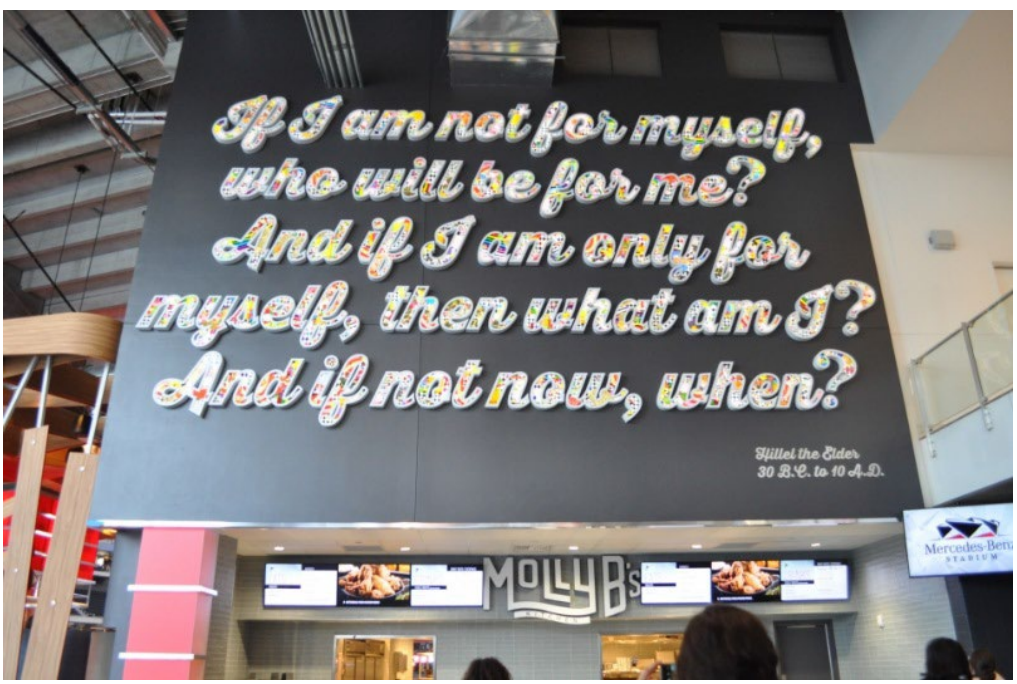


Figure 25. Quote from Hillel the Elder at the Atlanta Falcons Stadium

Appendix 9. The Home Depot's Core Values (Marcus and Blank, 1999)

Home Depot is the largest DIY store in the USA worth $365B. It ranks as number 34 in the world Fortune 500 list and 'was built from scratch' by two Jews Bernie Marcus and Arthur Blank (Marcus & Blank, 1999).

The following are the core values of Home Depot that both Marcus and Blank have carried into several other or their business and charity concerns.

Excellent Customer Service
Customers are The Home Depot's business. We must go the extra mile to give our customers exceptional value, knowledgeable advice about merchandise and to help them use those products to their maximum benefit.

Taking Care of Our People (Chesed*)
Our associates are key to our success. We strive to create an environment where all associates feel they are respected, their contributions are valued, and they have equal access to growth and development opportunities.

Building Strong Relationships
Trust, honesty and integrity are the foundations of strong relationships. We demonstrate these principles when we listen and respond to the needs of our customers, associates, communities and vendors.

Respect for All People
A work environment of mutual respect and inclusion is essential to the success of The Home Depot and its associates. Diversity is valued to better serve our broad array of customers.

Entrepreneurial Spirit
Our associates are encouraged to adopt and adapt good ideas from others and initiate creative and innovative ways of serving our customers and improving the business.

Doing the Right Thing (Tikkun Olam*)
We strive to understand the impact of our decisions. We accept responsibility for our actions. We do not tolerate dishonest or unethical behavior. We do the right thing.

Giving Back (Tzadacha*)

An important part of The Home Depot is giving of our time, talent, energy and resources to our community and society. Corporate community involvement is coordinated through The Home Depot Foundation. Team Depot, The Home Depot's associate-led volunteer force, uses the time and talents of associates to meet community needs through hands-on service.

Creating Shareholder Value

The investors who provide the capital to allow our company to exist need and expect a return on their investment. By upholding our core values, we are using their investment wisely, which ensures that we operate a profitable company.

*These values reinforce Chesed, Tikkun Olam and Tzadacha in a commercial leadership model. I am looking to extend this model as part of my research.

Appendix 10. Examples of Philanthropy in Famous Leaders

1) Warren Buffett (agnostic), donated $40.785 billion to "health, education, humanitarian causes", (BBC News, 2020)

2) Bill and Melinda Gates (agnostic) donated $27.602 billion to "global health and development, education" (Gates, 1995).

3) George Soros (agnostic Jew), donated $6.936 billion to "open and democratic societies." (Porter, 2015)

4) Richard Branson (atheist) pledged to give away half of his $5.8 billion personal wealth to charity) "I would be delighted if someone could convince me that G-d exists" (Frye, 2013; Lewis 2014).

5) Jeff Bezos (Christian) Richest man in the world personal wealth of $112 Billion. Known to have given over $2B to worthwhile causes. (Valinsky, 2019)

6) Bernie Marcus (Jewish) Founder of the Home Depot, personal wealth of $5.9 Billion. Has donated $2 Billion so far and has agreed to donate most of his fortune before his death. (Anon, 2019a and b)

7) Arthur Blanc (Jewish) Founder of the Home Depot personal wealth of $5 Billion. Signatory of the 'Giving Trust' committed to give away 50% of his fortune.

All the above are acknowledged as modern leaders who demonstrate a higher level of conscious leadership and who have found their own motivation and inspiration to make life better for others. The essence of 20/20 LEADERSHIP and this higher level of conscious leadership is finding the motivating factor in one's own life. As a Jew my leadership consciousness is guided by the lens of Judaism; others must find their own lens.

Appendix 11. Company C – Plant A and B Quantitative Data.

Appendix 11 provides the supporting data for the formal testing of 20/20 using PAR in Company C. Due to incorrectly completed returns, or returns where the reply was ambiguous, not all Plant A survey data was counted. Table 11 shows the number of actual returns by category and the number of total returns by survey in the data set. As Table 11 represents returns from 100% of the population (except as explained), the table demonstrates a total count or numeration of the population and so issues of sampling and sample size are not relevant. Table 12 shows the distribution of the respondents by shift.

Category	Number of Returns/Number in data set	
	(Survey 1)	(Survey 2)
Team Building	73/73	75/75
Morale	70/73	75/75
Leadership	67/73	75/75

Table 11. Number of Respondent Returns by Category and Survey for Plant A.

Shift	Population at 100% manning*
1	30
2	30
3	15

Table 12. Plant A Respondents by Shift

The returns in the first and second survey are non-paired data due to the need for anonymity in data collection, which can be considered a negative; however, the populations between the surveys exhibited very little change between the first and second survey. Thus, the surveys were completed by essentially the same personnel, which can be considered a positive.

Test for Normality

The data set from Plant A was subject to a Kolmogorov-Smirnov (K-S) test of normality Table 13. The K-S test demonstrated a normal distribution (P > 0.05). The data is therefore parametric and thus T-Tests are valid. The T-Tests however did not show that the plant level changes were statistically significant. Thus, further analysis will be required at the individual plant and shift levels by category using individual statistical or data visualization techniques.

	Plant A Total Scores	
	Survey 1	Survey 2
Mean	7.88	8.00
SD	2.95	3.12
T-test	P=0.4880	
K-S test	p=0.4888	p=0.1766

Table 13. Results of T-Test and Kolmogorov-Smirnov at Plant A

Tests for Statistical Significance of Plant A Data

As can be seen in Table 14, none of the arithmetic means showed positive improvement. Standard deviation shows overlapping curves between the first survey and the second survey which explains why the T-test showed no statistical significance of change. This reinforces the need for deeper analysis using data visualizations to understand why the qualitative data from interview and post-operationalization discussions showed the positive impact of 20/20 where this quantitative analysis does not. Therefore, further analysis will need to be carried out by splitting each category into individual shifts for both statistical and visual analysis of graphed data.

Categories	Team Building		Morale		Leadership	
	Survey 1	Survey 2	Survey 1	Survey 2	Survey 1	Survey 2
Mean	2.72	2.78	2.38	2.38	2.77	2.68
Sd	1.04	1.08	0.94	0.99	1.30	1.30
	T-test p=0.3634		T-test p=0.3313		Mann Whit =0.053	

Table 14. Statistical Analysis of Plant A Data

Explanation of Graphed Data

The histograms used below display the frequency of occurrence of votes by respondents in a particular category. Pairs of bars are used to indicate difference between the first survey and the second survey. These bars are colored blue for the first survey and brown for the second survey. All graphs show the percentage of the population giving a particular score given on the vertical axis, and the scores given on the survey on the horizontal axis. The meaning of the numbers 1,2 ,3 4, 5 are described in Table 15, which is a reproduction of the Plant A survey proforma against which respondents indicated their scores.

Category	1	2	3	4	5
Team Building	No teamwork, lack of focus	Team only pulls together when directed	Team is learning to pull together	Team is working well exceeding some objectives	Team is exceeding all objectives
Morale	Very bad	Could be better	Morale is OK	Things get better all the time	Could not be better
Leadership	Leadership team is weak	Leadership gets the minimum accomplished	Generally good	Leadership is driving the business	Has inspired me to be a leader

Table 15. Plant A Survey Proforma

In the graphed data, a reduction in the number of individuals giving a score of 1 or 2 in the second survey when compared with the 1st survey is considered a positive improvement as a larger percentage of the population have moved their score to a higher number. An increase in the number of people giving scores of 4 or 5 in the second survey when compared to the first survey is also considered positive as again a larger percentage of the population have given a higher score. Changes to the number of people giving a score of 3 are considered positive or negative when balanced with the other scores. In summary, a preponderance of scores moving from left to the right on the graph from 1 to 5 is positive and a preponderance of scores moving from right to left is negative. To aid interpretation of any change, the graphed results are highlighted by a traffic light system. Green indicates a positive improvement in the second survey, amber indicates a minor or neutral change (often just a result of rounding in calculations of percentages in the spreadsheet) and red is indicative that the second survey results were worse when compared to the first survey. In addition, an appropriately coloured arrow is used to show the direction of positive or negative movement from the first survey to the second.

Plant A Team Building Results

The combined graphed results of the three shifts of Plant A for the team building category shows a bi-modal distribution in the second survey, compared to the first survey which was unimodal as seen in Figure 26.

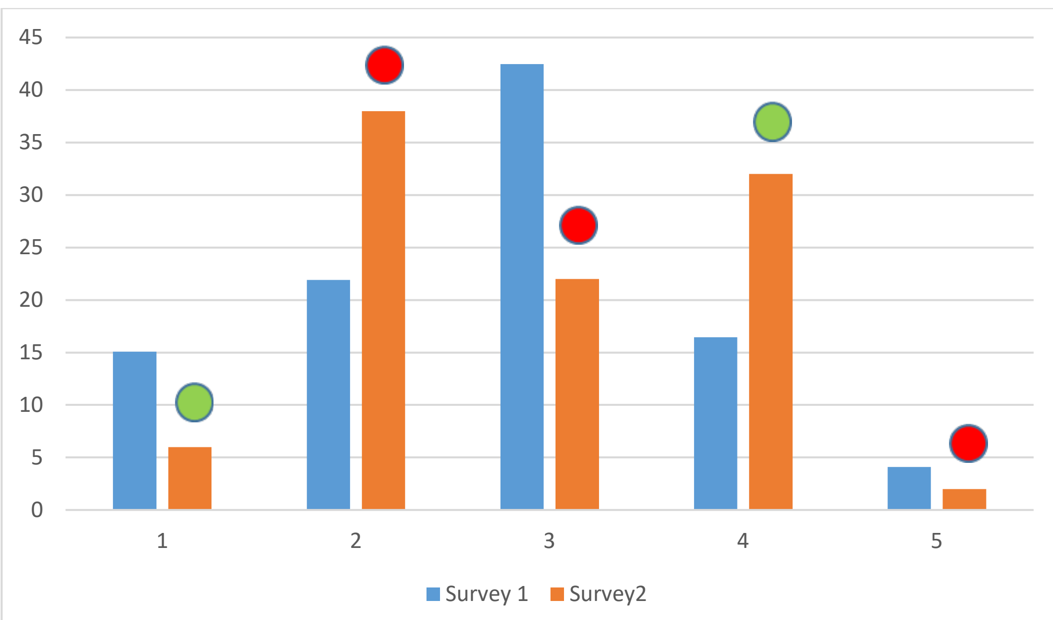


Figure 26. Percentage Change for Plant A Team Building Scores

Bi-modal distribution, i.e., two peaks in the data rather than one, is often an indication of having two separate populations (Stephanie, 2018). This data set is in fact three populations, i.e., the three shifts. To explain this bi-modal distribution the data set was split into three separate data sets, one for each shift to understand the three shifts individually.

Team Building First Shift Analysis

Team Building 1st Shift 1st Survey	Team Building 1st Shift 2nd Survey
K-S p= 0.00294	K-S p= 0.00028
Mann-Whitney U test p=0.24825	

Table 16. Team Building First Shift Test for Normality and Statistical Significance of Change

According to the K-S test Table 16, the data did not represent a normal distribution for either shift which is witnessed in the graphed data that does not demonstrate a bell curve. Therefore, a Mann-Whitney U test for demonstration of statistical significance was carried out. The Mann-Whitney U test is used to detect statistical significance of data that is not normally distributed. The Mann-Whitney U test found that the data was not different from each other as $p > 0.05$. Thus, further analysis will be undertaken by visual analysis of graphed data to triangulate with the qualitative data that showed the positive impact of 20/20.

Visual Analysis of Graphed Data

First Shift

The first shift data in Figure 27, exhibited a modal score of 3 in survey 1 compared to a modal score of 2 in survey 2. This indicates that the team perceived that team building had become worse over the period of the research.

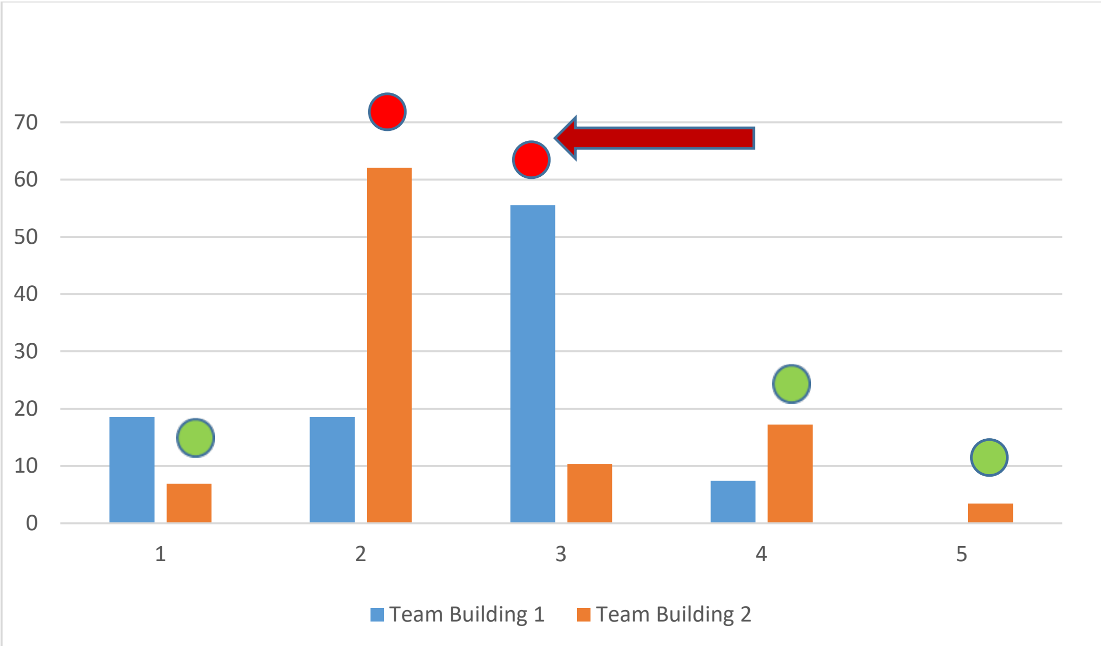


Figure 27. Percentage Change for Team Building Scores 1st Shift

First Shift Respondent's Feedback

Talking with 5 of the 27 members of the first shift, they said that they were impressed that after the first survey they had started change teams and their contribution was having an impact. However, they were frustrated that the change teams stopped when the researcher moved temporarily to another company location due to other responsibilities, even though I kept trying to encourage all the new leaders by e mail (Appendix 13). Supporting this lack of their leaders commitment, two respondents wrote comments on the second survey sheet without any comments being solicited. The first respondent wrote, "We had a change team, but the meetings just stopped," and the second respondent wrote "What happened to the change teams?" A third employee wrote on the second survey sheet "A positive change is only going to happen if we all take it serious (*sic*)." Following up this comment with 5 team members, several of them (the survey sheets were anonymous so I could not ask the actual respondent,) felt that they were taking the change project seriously, but leadership reverted to old ways when the researcher went off site.

When I had to temporarily consult at other plants as part of my normal duties between the 2 surveys, the local senior leadership had not kept up the change teams and they had to be re-started when I returned to plant A. This lack of leadership consistency had a major impact Plant A and particularly on the first shift. This is an important lesson for any researcher working on a project to improve leadership; commitment to change must be consistent and that leadership is for the long haul (Principle 4). This lack of consistency by senior leaders influenced some respondents to reply negatively on the second survey. This inconsistency also caused me to rethink the traditional PAR cycle and was the genesis of the revised PAR model 4.9.8.

Second Shift

The mean of the second perception survey compared with the first survey Table 17, for the second shift team building score showed an improvement in the perceptions of the shift with some movement in the two surveys as seen in the standard deviation, but not enough to be statistically significant as is shown in the T-test. Further analysis will be via visual interpretation of graphed data Figure 28.

	Second Shift	
	1st Survey	2nd Survey
Mean	2	2.68
SD	1.13	1.21
T-test	p=0.063	

Table 17. Plant A Second Shift Team Building Scores

Figure 28. Percentage Change for Team Building Scores 2nd Shift

Second shift showed a change in the modal score from 2 in the first survey to a modal score of 4 in the second survey as is seen in Figure 27. Overall, the second survey shows a positive change with a decrease in the frequency of the lower scores.

Third Shift

	Third Shift	
	1st Survey	2nd Survey
Mean	3.2	3.5
SD	0.70	0.62
T-test	p=0.11	

Table 18. Plant A. Third Shift Team Building T-Test

Third shift mean increased though T-Test result was P= 0.11 (i.e., not significant), Table 18. However, with only 13 people and a small data variance over the 6 months of this research, this data set is considered too small for a reliable T-test. This is where the visual interpretation of the graphed data becomes useful.

Third shift modal score of 3 in the first survey 1 changed to a modal score of 4 in the second survey, as is seen in Figure 29. The total decrease in percentage of the scores of 2 and 3 in migrated to the improved score of 4. In summary, 3rd shift perceived a small improvement in team building based on visual analysis.

Figure 29. Percentage Change for Team Building Scores 3rd Shift

Plant A Morale Scores.

Categories	Morale	
	Survey 1	Survey 2
Mean	2.38	2.38
SD	0.94	0.99
T-Test	p=0.3313	

Table 19. Plant A. Third Shift Morale T-Test

Plant A morale scores, Table 19, did not show a significant change between the two surveys. Statistical analysis of the three individual morale shift scores did not show significance and aligned with that of the combined unimodal distribution data of the combined Plant A morale score at Figure 30. The mean of the combined Plant A morale scores showed no change. The standard deviation showed considerable overlap between the two curves as demonstrated in the graphed data. Analysis of the visual data showed there was negligible change in the lower scores of 1 and 2, a small decrease in score of 3 and an improvement in the number of people who selected a 4 in the second survey. Visual analysis showed the mode was unchanged between the two surveys. In summary, the data suggests that over the period of this change morale showed a slight improvement.

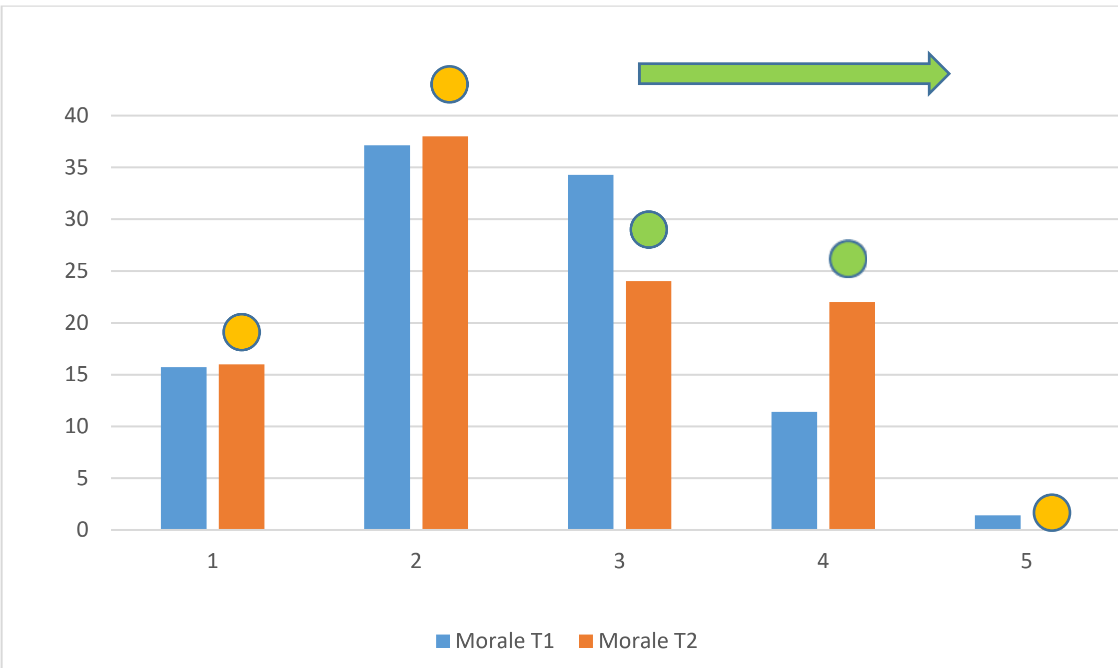


Figure 30. Percentage Change for Plant A Morale Scores

First Shift Morale Score

Though not statistically significant as per Table 14 above, visual analysis of the first shift data demonstrated improvement in the graphed data with a decrease in the score of 2 and 3 and an increase in a score of 4, Figure 31.

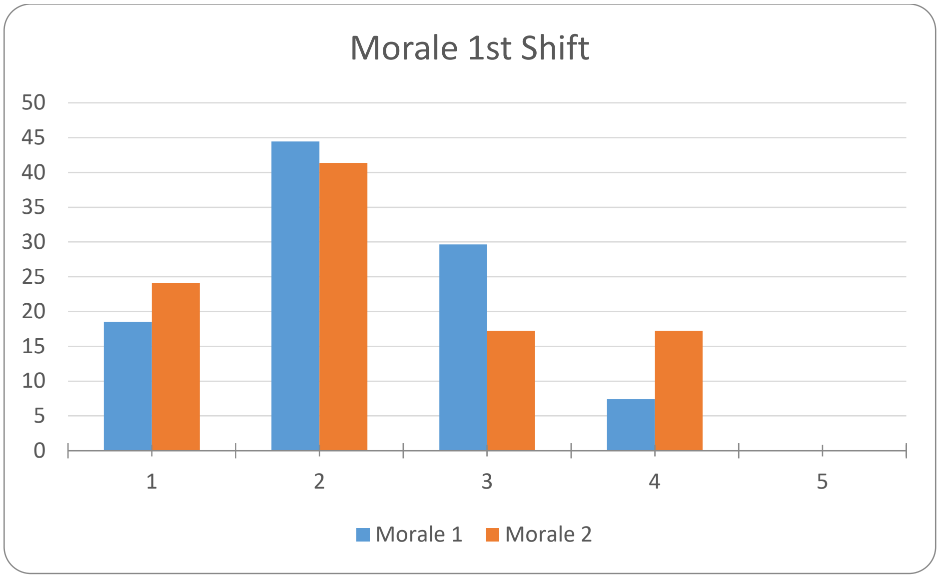


Figure 31. First Shift Morale Score

Second Shift Morale score.

There was no statistical significance in the change for this normally distributed data set.

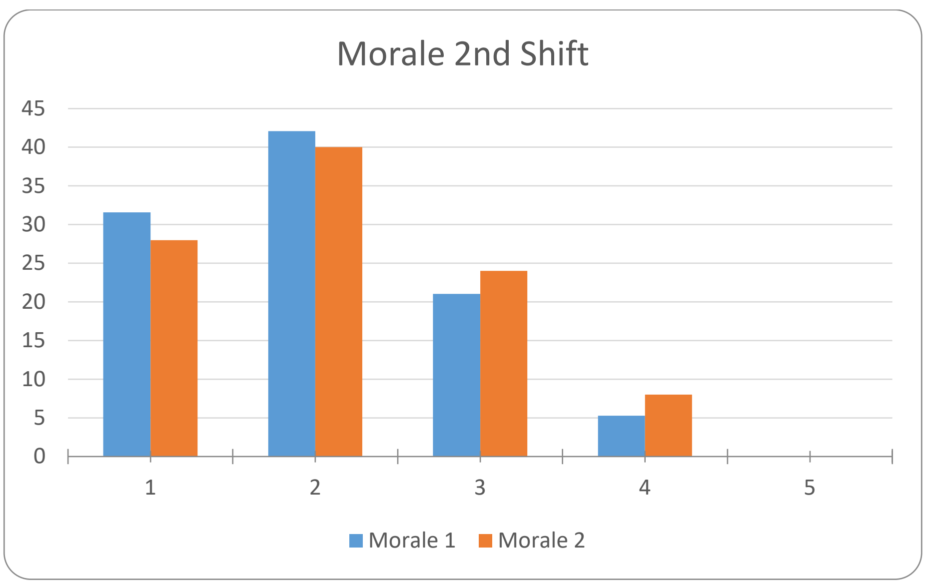


Figure 32. Second Shift Morale Score

In Figure 32, scores of 1 and 2 showed a decrease which is positive and scores of 3 and 4 showed a slight positive improvement. In summary morale cannot be said to have improved or become worse over this concentrated time of considerable change.

Morale Score Third Shift

The third shift morale score, Figure 33, shows no statistically significant data

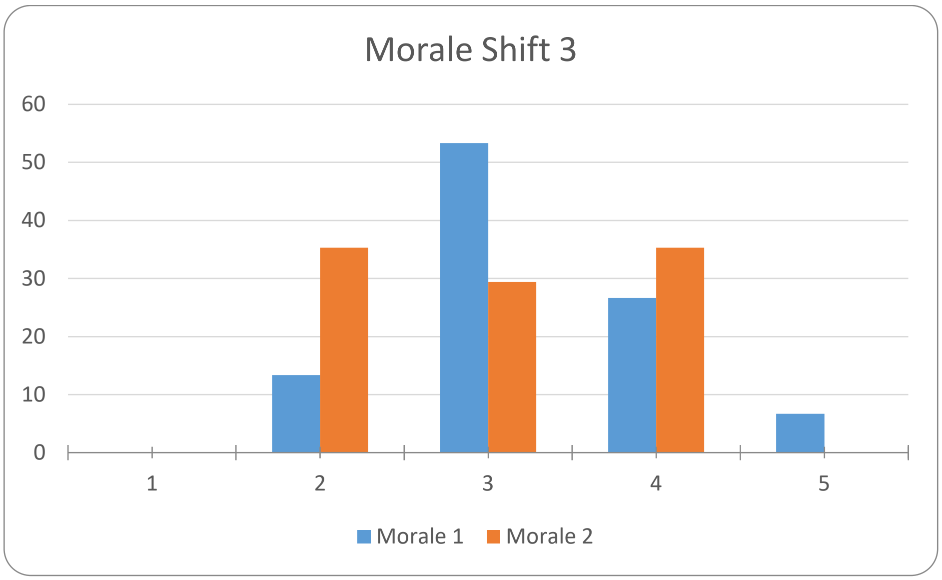


Figure 33. Third Shift Morale Score

Data showed that there was a definite mode of 3 on survey one with a mean of 3. There was no mode on second shift though the mean stayed at 3. Again, due to the small number of individuals on third shift the only conclusions that can be made is that morale was generally the same at the time of the second survey as at the first.

Plant A Leadership

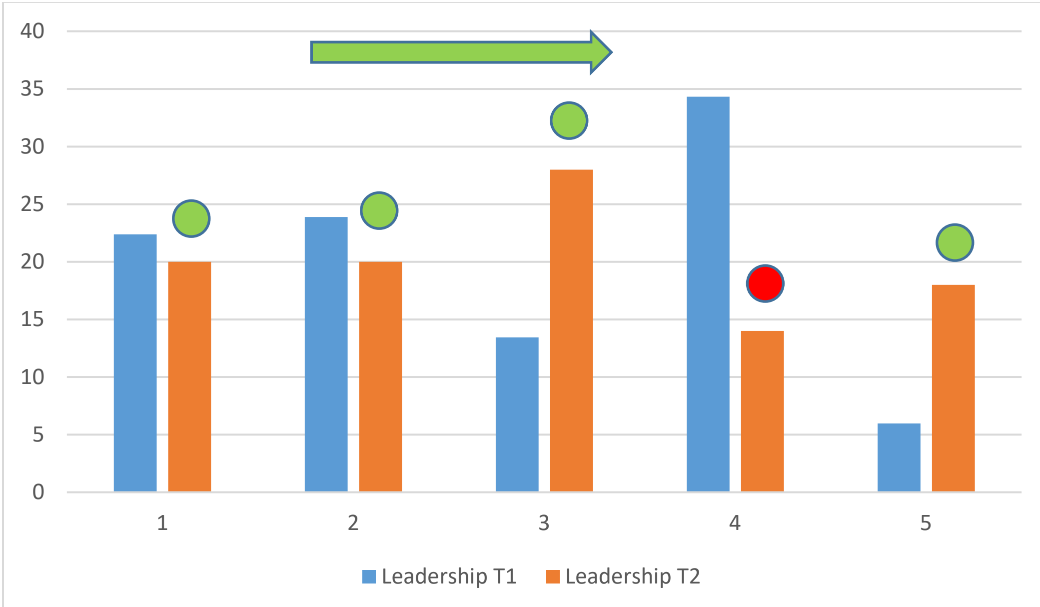
As this non-paired data set is a 100% numeration of the data, there are no issues of sampling or sample size. Statistically, the mean is lower in the second survey when compared to the first and the T-Test showed that change was not statistically significant.

A K-S test was carried out to test if the data demonstrated normality. The first survey K-S test p = 0.0012 so not normal, and the second survey has a K-S p = 0.0530 which is normal. As one set of data was not normal, a Mann-Whitney U test for non-parametric data was required to demonstrate if change was statistically significant, Table 20. A statistical significance would have to have a p = < 0.050 to state there is a statistical change. In this case the Mann-Whitney U test result for the entire Plant A leadership data was p=0.053 which indicates the data is not statistically different.

	Leadership	
	Survey 1	Survey 2
Mean	2.77	2.68
SD	1.30	1.30
Mann-Whitney	P=0.053	

Table 20. Percentage Change for Plant A Leadership All Shifts

Plant A Leadership



ip Scores

Figure 34. Plant A Leadership

Visual analysis does demonstrate a positive change in perception for scores of 1,2,3 and 5 though the mode has moved from 4 in the first survey to 3 in the second survey. However, these are small numbers of change, the score of 3 has improved suggesting those who previously voted 1 or 2 have improved their scores. However, as this is non-paired data, these are assumptions and suggestions not certainties. The Plant data set will now be examined on a shift-by-shift basis.

First Shift Leadership Scores

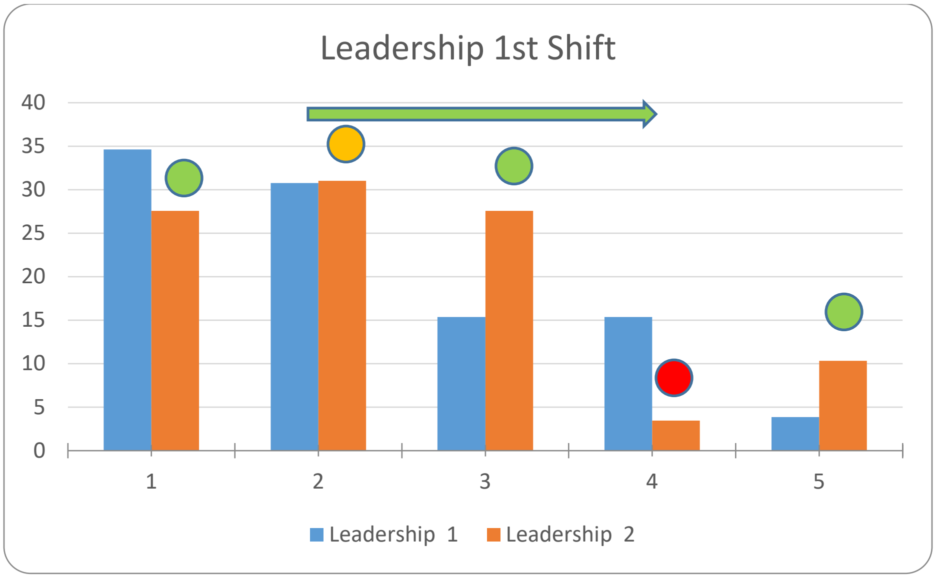


Figure 35. Leadership First Shift.

Figure 35, shows that the mode has moved from 1 to 2, and the mean improved from 2.1 to 2.3, and both data sets are normal with no statistically significant change. Visual analysis of the leadership category on first shift, Figure 35, shows a marginally positive pattern change in the perceptions of the 1st shift about their leadership as a result of using 20/20. Scores 1, 3 and 5 show an improvement with a score of 2 being neutral and score of 4 showing a reduction and an increase in the score of 5. Thus, from the visual data the perception is that first shift leadership marginally improved in the second survey. This is aligned with the team building score where the teams were dissatisfied with their leadership due to inconsistency with change teams when the researcher had to temporarily change locations.

Second Shift Leadership Scores

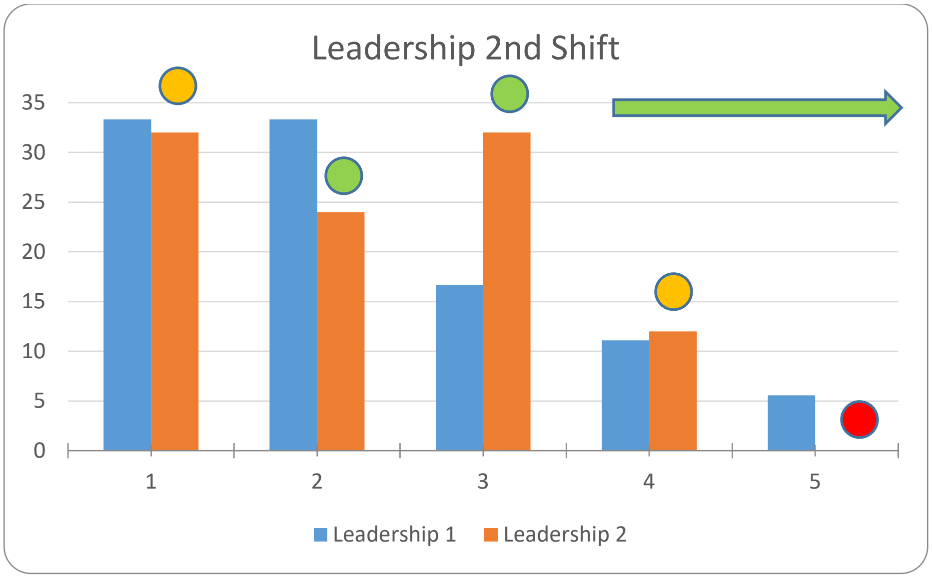


Figure 36. Leadership Second Shift

Figure 36, shows that this normal data does not demonstrate any statistically significant change. The mode moved from equal 1 and 2 to equal 1 and 3 and the mean changed from 2.1 to 2.48. The drop in the score of 5 represents 1.5 people. The visual data showed the largest increase in those giving a score of 3 in the second survey compared with the first survey. Overall, second shift shows a slight improvement in the perceptions of the competence of their leadership.

Third Shift Leadership Scores

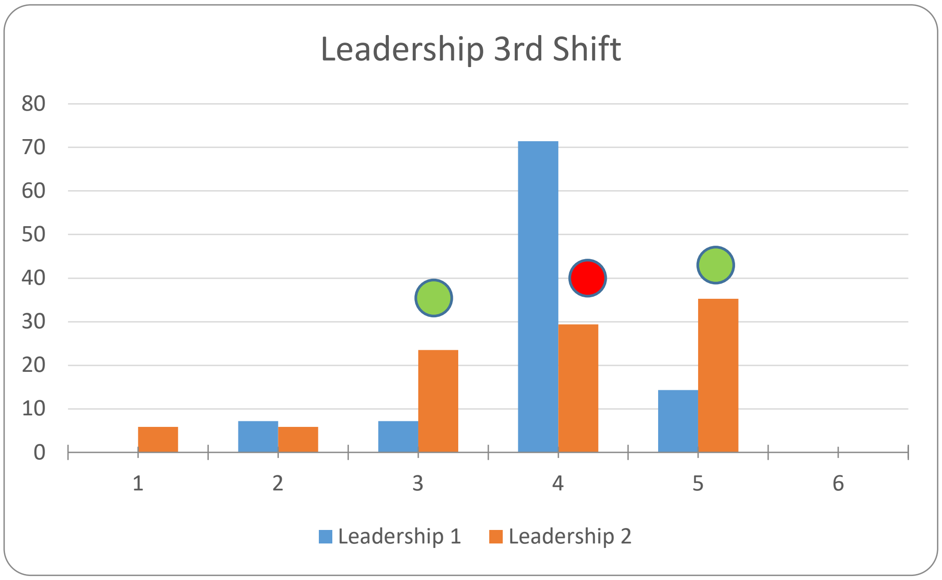


Figure 37. Leadership Third Shift

The third shift data in Figure 37, is normal. The means are unchanged at 4 and there is no statistical significance between the first and second survey for this small data set. Though the mode had marginally changed from 4 to 5, visual analysis shows that at best the change was only marginally positive with a score of 4 reducing and scores of 3 and 5 increasing.

Perception Survey Results for Plant B.

Plant B has a population of 75 individuals when fully manned. Due to vacations, incorrectly completed returns, or returns where their reply was ambiguous, not all Plant B survey data was counted. Table 16 shows the number of actual returns by category and the number of total returns by survey in the data set. As Table 21 represents returns from 100% of the population (except as explained), the table demonstrates a total count or numeration of the population and so issues of sampling or sample size are not relevant. As in Plant A, the survey one and survey two data sets are non-paired.

Category	Number of Returns/Number in dataset	
	(Survey 1)	(Survey 2)
Communication	66/71	72/74
Attendance	71/71	73/74
Organizational justice	71/71	74/74

Table 21. Plant B, Numbers of Returns by Category

Table 22 shows the distribution of the plant population by shift. This is important to the following data as it demonstrates for shift 3 why seemingly significant percentage population shifts are in fact only one or two people. Thus, the qualitative data is needed to triangulate with the quantitative to make further determinations of 20/20 effectiveness.

Shift	Spiral Manning at 100%	Average PAB Manning at 100%	Totals
1	21	15	36
2	16	12	28
3	9	3 (+6)	12 (18)

Table 22. Plant B Population by Shift.

It is also important that the manning was transferred frequently in and out of PAB and supplemented with temporary workers based on the production orders. Shift 3 was particularly impacted as the first shift to be cancelled when the order book was low or supplemented largely by temporary staff when production demand increased.

Statistical Testing

The data from both surveys were analyzed using a K-S test. Table 23 showed that all data had a p-value at > 0.05; thus, the data set is considered normal. A T-test was carried out of the entire Plant B data set to ascertain if changes in the three categories were statistically significant. This used the sum of all scores by each respondent and compared those scores from the first survey with the second survey. The result of the one tailed unpaired T-test was P=0.065, which indicates the data change is not significant though the average score increased from 7.9 to 8.56. Further statistical and visual analysis will be completed to determine the effects of 20/20.

	Plant B	
	Survey 1	Survey 2
Mean	7.90	8.69
SD	2.61	2.40
P=	0.0654	
K-S test	p=0.5687	p=0.2893

Table 23. Plant A, K-S Test Data

Plant B Categories

The three categories that were chosen for improvement in Plant B were communication, attendance and organizational justice and the scores and interpretations are at Table 24.

Category	1	2	3	4	5
Leadership	Leadership is weak and relies on shop floor 'experts'.	Leadership does what is required.	Leadership are the plant fire fighters.	Leadership is proactive meeting the need.	Leadership is inspiring and driving innovation.
Communications	People do not know what is going on.	Some sporadic communication.	Routine meetings enable two-way exchange.	Communication happens naturally at all levels	Quality communication drives the business
Attendance	Call-offs and no-shows are the norm.	Attendance is generally good.	This is a good place to come to work. .	I come to work to be with my co-workers.	Employees are our best recruiters

Table 24. Plant B Perception Survey.

As can be seen by the positive change in the mean in all the three category changes in Table 25, all categories saw improvement of the mean though only Attendance showed statistical significance. Assuming a significance level threshold level of 95%.

	Communications			Attendance			Organizational Justice	
	Survey 1	Survey 2		Survey 1	Survey 2		Survey 1	Survey 2
Mean	2.92	3.13		2.57	3		2.88	3.02
SD	1.25	0.95		1.26	1.10		1.06	1.00
T-test	p=0.1281			p=0.0155			p=0.2096	

Table 25. Statistical Analysis of Plant B Categories

Further visual analysis will now be demonstrated using the graphed data.

Plant B Communication.

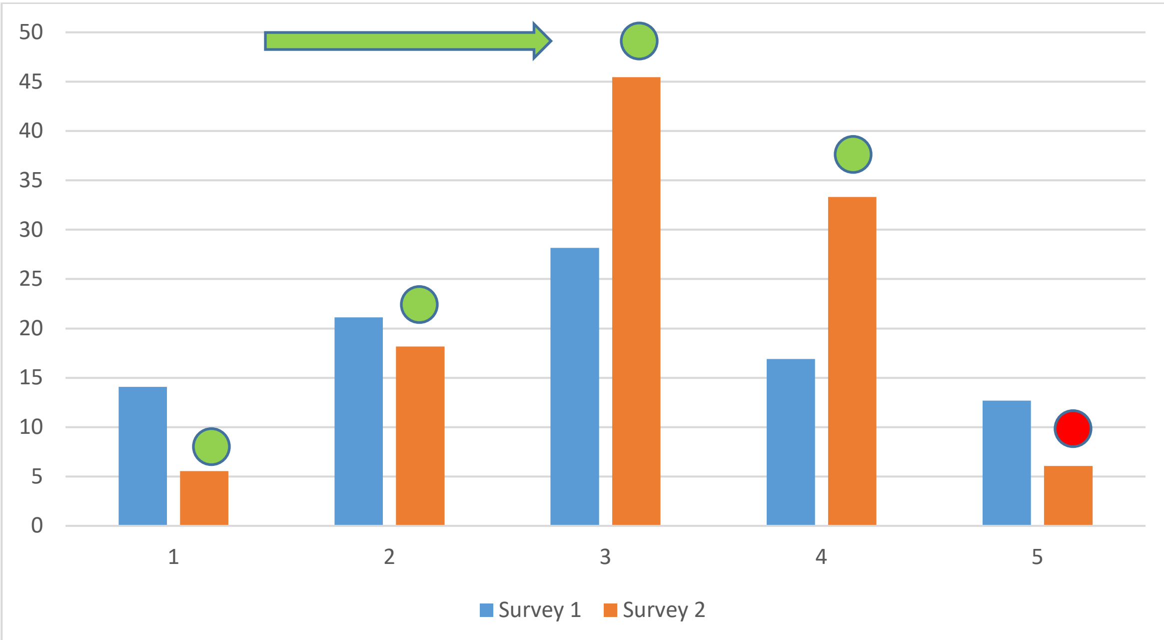


Figure 38. Percentage Change for Plant B Communication Scores All Shifts

3.9.7. In Figure 38, the mode is unchanged, the mean moved from 2.92 to 3,13. Though the recorded change in communications is not statistically significant, the perception of the majority of the 75 Plant B staff across all 3 shifts was that communication had increased in quantity and quality during the project. This is demonstrated with a decrease in the lower scores of 1 and 2 and an increase in the higher scores given for 3 and 4. This improvement is a direct function of the work of the communication (Principle 2) PAR team who identified the deficiencies and built a change team that implemented sustainable results (Principle 8) focused on 20/20. The key area of change was modification of the process for writing and checking the accuracy of work orders that after the change gave the operators clear instruction for the production order and thus increased quality and decreased frustration.

Plant B Attendance

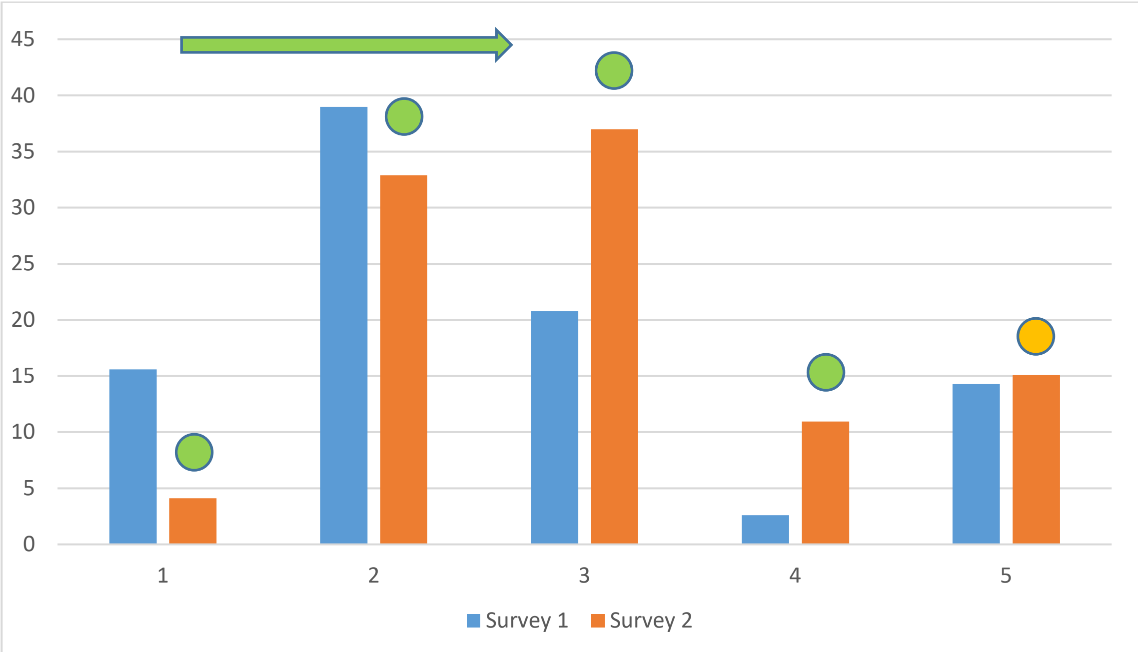


Figure 39. Percentage Change for Attendance Scores All Shifts

In Figure 39, the mode changed from 2 in the first survey to 3 in the second survey, the mean from 2.57 to 3, the change in the attendance scores is statistically significant. This is confirmed with an improvement in scores 1 through 4, as a result of the PAR change teams applying fairness and equity (Principle 6) in the design and execution of the new policy designed by the PAR team. This team proposed and executed policy change demonstrates a high level of participation with decisions made by the team supported by the senior management. Application of the new attendance policy designed by the PAR team saw an immediate improvement with perception of attendance improving between the first and second surveys. The plant manager stated, "That this was the single biggest improvement that has had a knock-on effect to improving the business." Not only did attendance actually improve, but the perception across the business was that attendance had improved.

Resolution of the previously inconsistent application of the attendance policy by the PAR team (Principle 7) removed a barrier (Principle 8) to workplace fairness which was addressed by the application of (Principle 1) and (Principle 6), which correlates with tikkun olam. Parity of treatment of people in the same building separated only by a partition wall was a major driver of dissatisfaction. That dissatisfaction was overcome by the work of the attendance change team (Principle 3), (Principle 11). Knowing that all staff would be present when expected enabled the shift supervisor to staff all machines in a planned fashion which enabled the maximization of production (Principle 5). This also impacted team building (Principle 1) by less movement between teams which also improved team efficiency (Principle 7).

Organizational Justice

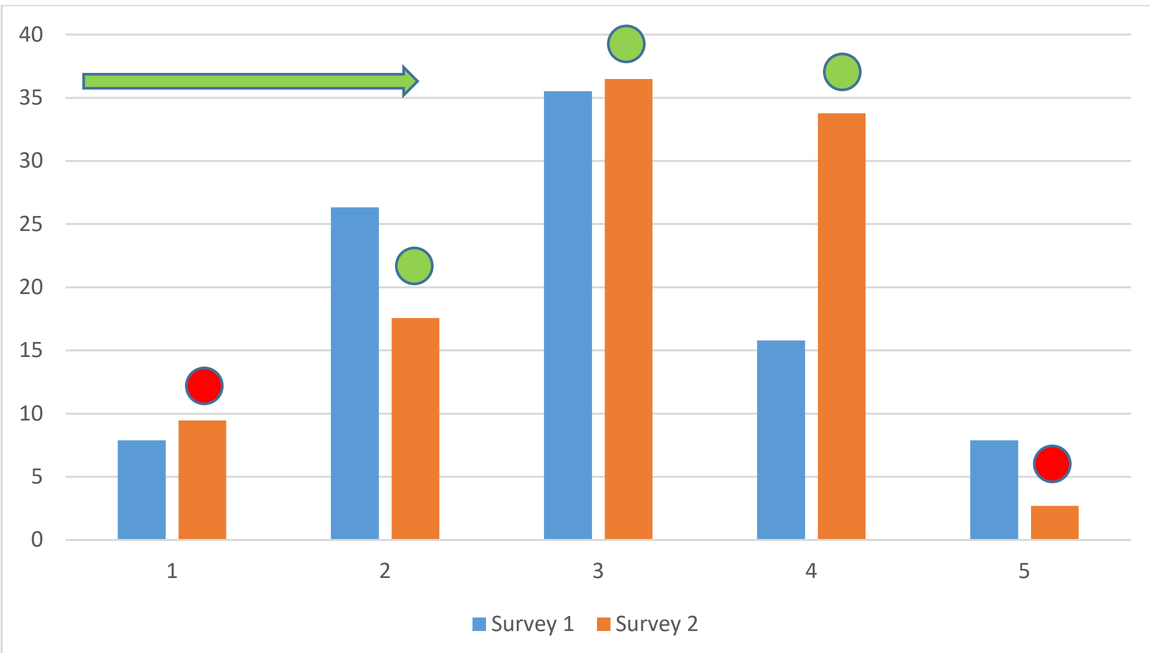


Figure 40. Percentage Change for Plant B Organizational Justice Scores

In Figure 40, the mean changed from 2.88 to 3.02, the mode remained at 3 and the T-test results for this category did not show statistical significance; however, the movement of the mean does suggest improvement. The visual analysis is more encouraging. This category shows progress in scores of 2, 3 and a 50% increase in a score of 4, Figure 39. In the first survey, respondents perceived that they were not being treated equally (Principle 6), even though they had not yet been exposed to concepts such as 20/20 and organizational justice. Individuals know intuitively when they are not being treated fairly or with a lack of respect (Principle 9). During 20/20 training, the teams were very favorably disposed to the change process to do 'the right thing (Principle 1). Organizational Justice is singularly the most difficult of the categories to understand as it has a philosophical, sociological, and highly moral dimension that categories such as attendance policy and understanding production targets do not. Organizational justice (in this research with its roots in tikkun olam) must be modeled (Principle 6) by leadership consistently to nurture (Principle 1) credibility and commitment. In business terms, it also increases engagement, which will lead to innovation, creation of corporate citizens (Principle 7) and an increase in the bottom line (Kiersch, 2012).

Discussion.

Plant A and B started from different places on the cultural, leadership and change continuum with Plant B being more ready for change than Plant A, but neither were in the optimum place to take advantage of a change program. Plant B was ahead of Plant A for the following reasons:

a. They had more experienced senior leadership.
b. Their teams were more established.
c. Less stuck in the previous owner's culture and more invested in change.
d. Equipment was generally in better condition than Plant A.
e. They had a dedicated maintenance department to quickly attend to defective machines.

Both organizations were aware of the need for change particularly in leadership development, building corporate citizens and beginning the journey to grow organizational culture. I was very grateful for the opportunity and the engagement of leaders and employees to work with me in the change, even though the groundwork was not in place as I would have liked before commencing the 20/20 focused PAR team projects. They all at least recognized that they needed change and were able to engage in this research with me. In industry, rarely if ever have I known senior management to say wait and optimize the input parameters before beginning a serial or parallel change.

Change management experts have emphasized the importance of establishing organizational readiness for change and recommended various strategies for creating it and although the advice seems reasonable, the scientific basis for it is limited (Weiner, 2009). Unlike individual readiness for change, organizational readiness for change has not been subject to extensive theoretical development or empirical study (Weiner, 2009). As this research was on a timeline for completion and the business imperative was also to move quickly, I did not have the opportunity of working with the teams to prepare them for change which impacted the final product. There is considerable opportunity for future research to look at how industrial organizations can move to a point of readiness to commence change as their normal modus operandi.

Though the three different categories for change across each plant did not all show that change was statistically significant, the visual interpretation of the graphed data demonstrated that 20/20 was perceived as improving the organizational culture. This positive impact was confirmed in the Reflexive Thematic Analysis of post-operationalization training interviews and surveys which showed not only the impact of 20/20 on the work environment but also on the individuals in the work and social environments. The quantitative data added a much wider perspective than the qualitative data as individuals were asked in surveys and interviews for the most important lesson that they had learnt in 20/20 training. Importantly the balancing metric of OEE was not negatively impacted in this study as was a requirement and both locations saw a positive increase in OEE. Therefore, both qualitative and quantitative data demonstrated the utility of the application of 20/20 LEADERSHIP in Plant A and Plant B. Had this study not had to be cut short due to the constraints of it being a part of a time limited DBA study and the subsequent buy-out of Company C, a longer study may have provided further evidence of 20/20 LEADERSHIPS' utility. In this I can only commend other leaders to apply 20/20 to their own circumstances and report on their experience of the model's utility.

Appendix 12. Examples of Coaching Artifacts

Below are a series of examples of the records of coaching sessions that detail the session and expectations.

Table 26.

Coaching Meeting template			Complete shaded area efore session
Date:	7/5/2018	Name:	AAA
Observed Behavior Number 1		Needs to build time to work on the business.	
Clearly define expectation of the behavior change desired for this meeting		Add strategic time to LSW.	
Brainstorm Actions		Due to high turnover and low levels of training, Travis finds that he is spending too much time working in the business and not enough time on the business. The change teamwork he is doing has highlighted the need for a robust process of training and the identification of trainers for both PAB and for Spiral. With this is position it will free up time for operators, supervisors and eventually for Travis also. AAA also needs to put time for strategic thinking on his LSW so that he does not lose the time due to reactive activity.	
Solution		AAA will add strategic time to his LSW.	
Follow up Plan			

	I will audit his LSW during my next visit in August and find out how the strategic time has been going.

Date:	7/3/2018	Name:	BBB
Observed Behavior Number 2		BBB needs better process around OBC boards.	
Clearly define expectation of the behavior change desired for this meeting		Operators are not using boards.	
Brainstorm Actions		Boards are too complicated, and we are asking the operators to complete too many tasks but with no-time line hence, the boards are not being used by operators to drive the right things. As a result, John has to chase progress and take the lead, which should be the responsibility of the operator.	
Solution		BBB reduced the number of takes on the s1 board and added clear times for completion of each task. Board is now being completed regularly. He now needs to work closely with the operators to set the expectations and hold the operators accountable. John was very positive about this change that will reduce his workload.	
Follow up Plan			

	Next visit I will check with the operators on how effective the boards have become. Also arranged for the IPG first lines and leaders to visit converting at to attend a pre-shift meeting and to see how the operators manage their hourly performance management.

Coaching Meeting template			Complete shaded area before session
Date:	7/18/2018	Name:	CCC
Observed Behavior Number 1		On-going coaching on his interaction with other team members.	
Clearly define expectation of the behavior change desired for this meeting		Learn to accept help and build relationships with people who can help him become successful.	
Brainstorm Actions		This is the third coaching session where we had looked at building relationships. This week was with his line manager who had been the maintenance manager and was now production manager. He feels that he now has to train his line manager to be	

	a production lead. This is in fact the case, and we spoke about how every good leader must learn to build bridges and to be able to manage up. CCC acknowledged that everyone was different, and it was his role to find out how each one 'ticks' and then figure out how to get the best out of them. He related this to how he coaches little league. He also said that he must ensure that he and R can find time to just talk about work related activities, machine efficiency etc. B suggested that this should be added to both his and his line manager's LSW.
Solution	CCC suggested that he and his line manager set time on their LSW for at least a weekly park bench chat to build their relationship and for the team to see his line manager on the floor focusing on production rather than maintenance issues.
Follow up Plan	This is my 4th coaching session with CCC. Initially he was reticent to talk and I had to find side topics for him to just open up. Now he is talking far more freely, and he seems genuine in going with the process. I have another month coaching CCC at the end of which I will have a better measurement of progress. Next session I will check if CCC and his line manager have a session entered onto their LSW.
Notes	CCC is becoming more positive in the coaching process. I need to follow up with line manager and GM if this is having an impact on his performance.

Table 26. Examples of Records of Coaching Sessions.

Appendix 13. Note to Encourage New 20/20 LEADERSHIP Leaders and Team Members

This is an example of an email to encourage the PAR team when I could not be with them due to other commitments.

……

Happy Monday,

You are all now well on the way as leaders of your change teams. This note is to encourage you to think what you will do this week to drive forward to the next step on your change process. For those of you that had projects from the 1st line training you should be nearing completion. Remember to over communicate progress to the entire team not just the change team. The more we communicate the more people talk about and ask questions about the changes, and eventually ask how can they be a part of the change? Focus on the person-centered ground rules for leadership to grow the business and own the change; this will build bridges and continue to drive the business forward.

Have a great week.

……

Appendix 14. DiSC Psychometric Testing

DiSC, is a psychometric tool used as part of the recruitment and team building process at Company A Table 27. DiSC is based on the theory of psychologist William Moulton Marston, which centers on four different behavioral traits called: dominance, influence, steadiness, and consciences. This theory was developed into a behavioral assessment tool by industrial psychologist Walter Vernon Clarke. Psychometric testing has is distractors such as Kaplan (2009) however, when I completed the assessment, I was graded as a 'DC,' with a preponderance of the 'D'.

• D Type Characteristic	• My Reflections
• Motivated by winning, competition and success.	• Success is important, but how members of my team achieve success is equally as important. My motivation is to nurture an environment of social justice, so each member of my team can reach their maximum potential building their own confident moral compass.
• Prioritizes accepting challenge, taking action and achieving immediate results.	• I have a problem saying no when asked to do more and more tasks. Sometimes in my earlier career, I took so much responsibility that I would become ineffective. On reflection that was all part of my wanting to be accepted by as many of my peers and superiors as possible. This was particularly when I first became an officer, when the

	majority of my peers came from better schools and had degrees when I only had a Higher National Certificate. More than this I wanted to do well, this comes from my Jewish culture and upbringing. A large part of that goes back to my 'immigrant' upbringing with a desire to assimilate and fit in. Growing up as a second-generation immigrant Polish Jew with constant stories from my grandfather of what happens when one is different had a bigger impact on me than I realized until engaging with this study.
• Direct, demanding, forceful, strong willed, driven, and determined, fast-paced, and self-confident.	• I am almost in complete agreement other than self-confident. I continue to look for approval in others when I already know that what I am doing is correct. (2013) I have changed over the past 5 years as I have built confidence in my role as civilian senior manager based on my success.
• May be limited by lack of concern for others, impatience and open skepticism.	• This does not reflect who I am; I am very conscious of my level of concern for others and will assist them to my own detriment to help them succeed. However, if after having done everything I can to make a person

	successful if they do not get on board, I will try to have them removed as quickly as possible for the benefit of the business and in my mind for their own benefit. Rather than being skeptical of others, I am sometimes too trusting. I will continue giving individuals the benefit of the doubt when I should have moved on.
• May fear being seen as vulnerable or having advantage taken of them.	• I do feel vulnerable particularly with those who I perceive are better educated than I am. I do not feel taken advantage of, rather I will overextend myself willingly if I think I am the best person for the job.
• Values competency, action, concrete results, personal freedom, and challenges.	• Yes, if we are not achieving, we are just treading water. I do not view myself as a custodian but a challenger to the status quo. Business needs results that will mean some will not make it. I do not like it, but I will take action to remove individuals if an individual does not change errant behaviors particularly after mentoring or coaching.

Table 27. DiSC Survey Results.

Appendix 15. RTA 2: Plant A and Plant B Post Operationalization Training Student Comments

These comments are the basis of the post operationalized 20/20 LEADERSHIP latent reflexive thematic analysis.

Question: What are two things that you have you learned from 20/20 LEADERSHIP training that you can use in your leadership?

Ty. – "I need to build great relationships with co-workers. I need to work on good listening skills, listening is key not pointing fingers. Don't punish people when things are outside of their control. Employees should not take the fall for bad leadership."

St .– "Know your people, listen to the machine operator, he knows his machine better than anyone. Lead by example even the dirty jobs."

K. – "As a result of this meeting, I will be able to go to my shift and be able to run my shift in confidence."

Ke. – "Build Relationships. Be strong, step-up, be confident. Learn how to talk to people. Work on morale."

T. – "I am accountable for how the plan is executed."

M. – "I have to keep everyone working in the same direction."

J. – "Take plans from everybody to make sure the right plan is chosen and in place".

P. – "Try to use everybody's ideas, sometimes it might not work but only allow a plan to fail once."

C. – "It's possible to over-delegate, you have to think and plan before delegation."

J. – "Due to this training, I will be able to make better decisions, employee good delegation and have accountability to myself and others above and beneath me."

S. – "This training was good to me to help my co-worker ready to move the product in a great form (sic)."

Tm. – "Due to this training, I will be accountable for my decision making."

R. – "Due to this training I will be able to become a better leader.

Jn. – “Leadership is relationships. I have to connect with my co-workers both bosses, peers and those I lead. I have to know people to get the best from them.”

Dd. – “I have to own it. There is no they, there is only we and our responsibility.”

Re. – “Communication improvement is a journey. I must communicate problems consistently to my leaders even when it is repeating the same things that are out of my control to fix. Be persistent.”

Below are comments after training in Plant B. These comments, transcribed verbatim, were made in a group setting to both the researcher and the plant GM after 16 hours of training.

Tr. – Plant Manager – This is the first time in my career I have received such “relevant and impactful training”. The effect of this training is “paradigm shifting.”

Ed. - “This training has opened my mind opened a door about what is leadership. This training tells me what I want to be, helps me know how to be with people what to do on a daily basis about taking people from the beginning to the end (sic).”

Jo. - “Learning how to ask people what I really want to tell them (sic).”

Kv. - “Understanding how people react in times of change. How I act toward people drives how they will react to me. 5S has become an opportunity because of how I react with people (sic).” The training “Give me insight on being a better leader and dealing with people individually not everyone is the same and each day is different to each person, they need different motivation, I have to give them a reason to do that (sic).”

Tim. - “Have to have a lot of patience with people – explain everything spell out the a to z.”

E. - “Quality of relationship is important; it is like building a bank account (sic).”

T. - “Leadership is people.” His most important learning was that leadership is people-focused core of 20/20 LEADERSHIP.

L. - “Help me to get the inside on business, issue is resistance from both sides on willingness to change. Sometimes difficult for me to understand what we are trying to do.”

L. - “I am more aware of what I don’t know.”

L. - “I now see that I struggle with protocol – I need to do the right way to get things done properly (sic).”

T. - “Leading putting people first builds friends.”

Jo. - “Learning that you have to be patient with people, I have to find how to work with that person.”

T. - “I am becoming a coach not just a teller.”

T1 – I am accountable for how the plan is executed.

M – I must keep everyone working in the same direction.

J1 – Take plans from everybody to make sure the right plan is chosen and in place.

C – It is possible to over delegate, you must think and plan before delegation.

P– Try to use everybody’s ideas, sometimes it might not work but only allow a plan to fail once.

J2 – Due to this training, I will be able to make better decisions, good delegation and accountability to myself and others above and beneath me.

K1 - Because of this training I will be able to go to my shift and be able to run my shift in confidence.

Scott – This training was good to me to help my co-worker ready to move the product in a great form.

T2 – Due to this training, I will be accountable for my decision-making.

R – Due to this training, I will be able to become a better leader.

E1. “This training has opened my mind opened a door about what is leadership. This training tells me what I want to be, helps me know how to be with people what to do on a daily basis about taking people from the beginning to the end. (sic)”

J3. “Learning how to ask people what I really want to tell them. (sic)”

K2. “Understanding how people react in times of change. How I act toward people drives how they will react to me. 5S has become an opportunity because of how I react with people (sic)”

K3. “Give me insight on being a better leader and dealing with people individually not everyone is the same and each day is different to each person, they need different motivation, I have to give them a reason to do that. (sic)”

T3. “Have to have a lot of patience with people – explain everything, spell out the a to z.”

E2. “Quality of relationship important, it is like building a bank account. (sic)”

T4. “Leadership is people.”

L1. “Help me to get the inside on business; issue is resistance from both sides on willingness to change. Sometimes difficult for me to understand what we are trying to do.”

L1. “I am more aware of what I don’t know.”

L2. “I now see that I struggle with protocol – I need to do the right way to get things done properly.”

Q. How is this way of leading impacting how you lead?

T1. “Leading putting people first builds friends.”

Jo. “Learning that you have to be patient with people, I have to find how to work with that person.”

T2. “I am becoming a coach not just a teller.”

I. “I help others to find solutions rather than fixing the problem for them.”

Appendix 16. Explanation of Kosher Food Policy

Torah states that Jews are not to eat pork nor most seafood, neither can they eat meat and dairy products at the same meal. How these rules are interpreted is different in each denomination. The orthodox take a literal translation of the biblical verse that we are prohibited to eat a calf boiled in its mother's milk, which was common in pagan tribes (Exodus 23:19) and interpret this as meat and dairy are never consumed at the same meal at any time. The orthodox will have two kitchens, one for meat and one for dairy, two sets of plates, cutlery, etc. to ensure there can be no cross contamination. Conservative Jews would usually not have two kitchens, but neither would they eat a cheeseburger, or have ice cream after eating a roast dinner, but they might have two sets of cooking pots, plates, cutlery etc. For Reform or Reconstructionist Jews, they might take the literal command never to boil a calf in its mother milk but anything else is fine. Orthodox would not eat in the home of another Jewish denomination and would only eat in a restaurant that is certified by the Jewish authority as glatt kosher. It is also important to realize this not only relates to freshly cooked meals but all food. For example, a cereal bar could be meat or dairy; if it contains milk products it would be dairy, if it contains gelatin from animals it would be meat. If it contained both it would be trief which means it would be forbidden for consumption by kosher Jews.

Appendix 17. Practitioner Developed Definitions

Over the period of this study my personal definitions have developed from my first understandings due to interaction with the PAR team's new knowledge and interactions in the synagogue and on the shop floor. Many of these terms were tested in this thesis using the perception survey, other terms would now benefit from further research. To that end each key term's definition is provided with an indication of how others could use these definitions to test the application of 20/20 LEADERSHIP in their own research. This annex tracks changes where the definition changed over time.

1. Industrial leader.

My initial definition: An individual who successfully manages resources to achieve an objective.

Developed Definition: A values based authentic individual who maximizes the potential of people and process to build self-sustaining change that drives value to the bottom line Avolio, et al. (2019).

Testing: This was tested in the final Company C PAR projects using the perception survey.

2. Authenticity

My Initial definition: How an individual leads as their authentic self.

Developed Definition: Though authentic leadership has many definitions and attributes, the working definition of authentic leadership used throughout this research is that of Avolio, et al. (2019), which has four dimensions: self-awareness, balanced processing, transparency, and the ethical/moral dimension.
Testing: Perception survey.

3. Standards.

My initial definition: A set of criteria against which compliance can be measured.

Developed Definition: A set of cultural and other criteria established by the community to move that community from current state to future state, (Schein, 2010).

Testing: Standards agreed by the community would be tested via a longitudinal study.

4. Self-accountability

My initial definition: A personal discipline ensuring the individual holds themselves responsible for living by and demonstrating that they live by their espoused standards and values.

Developed Definition: Willing to answer for and to be accountable for the outcomes resulting from an individual, behaviours, and actions. The condition of having to answer, explain, or justify one's actions or beliefs to another.   Accountability is a composite of numerous factors: being held responsible for one's actions, being identifiable as an actor, evaluation by an audience, and providing validation for one's behavior. (Lerner and Tetlock, 1999)

Testing: This could not be tested by others but by the individual through honest self-reflection and journaling the self-aware individual could track their own levels of self-accountability.

5. Humility.

Initial Definition: Setting aside ego to get the best ideas from the entire team.

The dictionary definitions generally define humility as the quality of having a modest or low view of one's importance and accentuate humility as a sense of unworthiness. In a religious context this is extended to a recognition of oneself in relation to a deity. Collins (2001) posits that humility is the outworking of an individual's desire to serve that comes from an intrinsic desire. Collins found that consistently high performing organizations were led by individuals who possessed a blend of humility and strong personal will, whose ambition was the success of the organization rather than their personal success. In PAR I found the role of the leader is to put themselves as equal or subservient to the team as a facilitator of team success rather than the leader's personal success. The required output is sustained business success rather than personal gain.

Developed Definition: The ability to put the needs of others ahead of one's own and facilitate change for the betterment of individuals, teams and business.

Testing: Perception survey. Did the leader place the needs of the team and the business ahead of personal ambition?

6. Mentoring

My initial Definition: Providing guidance to others.

Dictionary definitions revolve around a more experienced individual advising, guiding or training a less experienced individual. The mentor offers the advice but within this relationship there is an understanding that the advice will be followed. Within this work with the PAR teams, this is extended to include a selfless offering of this mentorship through relationships focused on behaviours and skills outside of just that which is needed to be successful at completing a task and includes life skills. The mentor is a transitional figure to facilitate excellence in others (Gibson, 2007).

Developed Definition: Guidance of others both peers and subordinates through a selfless giving relationship with the aim of building excellence in others.

Testing: The mentees and a third party through reflective practice measure how the direct influence of the mentor is impacting their own leadership or team practice.

7. Coaching

Initial Definition: Providing an individual with a safe space in which they can explore solutions to promote their own growth though leader facilitated talk therapy. The aim being is to enable the individual to become the best version of themselves that they can be. The work of Rogers (1967) on person centred learning is the foundation of modern business coaching.

Developed Definition: Subordinate led personal change facilitated but not influenced by the coach.

Testing: Person centred change measured by reflective thematic analysis at the end of the PAR projects.

8. Fairness.

My initial Definition: Treating individuals in all situations in the same way.

Dictionary definitions revolve around the state, condition, or quality of being free from bias or injustice, a state of even-handedness. Greenberg and Cropanzano, (2001 p.1) link fairness and justice in what they call ‘Fairness Theory’, that presumes that “the central topic of social justice is the assignment of blame. When people ascertain the fairness of someone’s actions, they are trying to decide whether to hold the person accountable for those action.” Tikkun Olam as a central core of 20/20 LEADERSHIP focuses all action on the equity in repairing a broken world irrespective of who the players may be or the situation in which they find themselves.

Developed Definition: The drive to promote equality of action and doing the right thing in all situations.

Testing: Perception survey as part of a longitudinal study.

9. Integrity

My initial Definition: Living up to one's own moral code.

"Integrity is a complex concept with alliances to conventional standards of morality and the keeping of promises" (McFall, 1987, p.5). In Judaism one maintains integrity to Torah, and Jewish history and culture.

Developed Definition: A gut level commitment to live according to one's core commitments and code.

Testing: The views of one's teams about the consistency of one's integrity in operational practice.

10.Organizational Justice

My initial Definition: Doing the 'right thing' in the workplace in every situation.

Tikkun Olam is at the heart of fair treatment of all in 20/20 LEADERSHIP and this is given detailed examination in this thesis. In every interaction in the work place the motivation must be the application of social and individual justice to ensure even-handed outcomes and growth of the individual the team and the business.

Developed Definition: Doing the 'right thing' in all circumstances in the organization to promote growth of the individual, the team and the business, (Berghofer, 2019).

Testing: Longitudinal perception survey.

11.Self-Awareness.

Definition: Self-awareness is the degree to which the leader is aware of their strengths, limitations, and how others see them and how they impact others. To be self-aware, one must understand oneself and that begins with one's values (Kramer, 2017). This was reflected in the Part 1 semantic RTA and as a result is recorded in (Principle 10) of 20/20 LEADERSHIP.

Testing: Longitudinal survey by team members using AL survey such as (Avolio, et al., 2019).

12.Vision.

My initial Definition: The ability to understand and quantify the future state for the team or company.

Working in PAR widens the importance of vision from ‘the’ leader to nurturing ‘the team’ to the point that the team can develop their own vision of team objectives i.e., goals aligned with the business direction.

Final Definition: The ability of the team or organization to understand and quantify the future state or vision of the company.

Testing: Longitudinal survey to assess whether the team achieved the vision as detailed at the start of the project.

13. Organizational Development (OD) in Manufacturing.

Initial Definition: The Chartered Institute of Personnel and Development (CIPD) define OD as “ The planned and systematic approach to enabling sustained organizational performance through the involvement of its people,” (CIPD 2020).

This definition limits OD to people and a function of HR. OD needs to be far more and be a function of all leaders in the organization. OD in this thesis developed to cover people, processes and products.

Final Definition: The sum of continuous improvement efforts covering people, processes and product, designed to sustain and improve the organization and market share.

Testing: Qualitative and quantitative triangulated analysis was used to measure the growth of QD during this thesis.

14. Operational Excellence.

Initial Definition: The Institute for Operational Excellence defines operational excellence as “the point at which each and every employee can see the flow of value to the customer and can fix that flow before it breaks down (Eby, 2019) .

Operational Excellence in term of this research is a combination of the application of Lean manufacturing tools and the cultural change that makes these tools the normative operating procedure.

Final Definition: The state achieved by maximizing manufacturing potential and reaching the calculated OEE for the production line, Operational excellence is a culture that calls on all employees to reduce waste at every opportunity to provide maximum customer value, Tools used to achieve OPEX in this thesis include lean manufacturing, 6S, RCPS, Visual Management coaching, GEMBA etc.

Testing: OPEX improvement was measured independently using the company derived OEE balancing metric.

15. Overall Equipment Effectiveness (OEE)

Definition: OEE is the gold standard for measuring manufacturing productivity, it identifies the percentage of manufacturing time that is truly productive. OEE is a framework for measuring the efficiency and effectiveness of a process, by breaking it down into three constituent components, quality, speed and quantity (OEE.com). The product of line speed, quantity and first pass quality measured as a percentage. Allowable deficit is subtracted from 100% to allow for maintenance, product change over and allowable waste such as product trim on a paper machine. Thus, an OEE of 88% could be considered best in class for a particular product on a particular production line.

Testing: Change in OEE will be measured by the company derived balancing metric.

Appendix 18. Two Examples of Personnel's Reaction to 20/20 LEADERSHIP Training.

This appendix details the reactions of two personnel from my quality team to 20/20 LEADERSHIP, one Gwen, that did not buy-in to 20/20 LEADERSHIP and the second Kay, who became an 20/20 LEADERSHIP advocate. Both were subject to a Personal Improvement Plan PIP that outlined the company requirements of their performance in order that they retained employment with Company B. The PIP, detailed below, required an at least monthly coaching session with me at which they would explain how they were adapting to the PIP goals. Kay took up the opportunity immediately and would meet with me over and above the requirement up to 3 times per month and see completely engaged with 20/20 LEADERSHIP and the Future Leaders Club (FLC) as described in 3.3.1. Gwen did not engage with 20/20 LEADERSHIP did not regularly attend monthly coaching sessions and did not integrate with FLC. More importantly for the business, she made no attempt to improve the standard of her work which as a raw materials quality super visor had a direct impact on waste, cost, and customer satisfaction.

<u>Gwen's Story</u>.

Gwen had been with the company for 23 years. She was an older lady with retirement in her sights and would frequently ensure that everyone knew how many years, months, and days she had left before retirement. I had not really been aware of her until I took over the quality team, but I felt she was likeable enough. However, I was to learn she was universally disliked, she was very negative did not accept responsibility and was bad at her job. She was responsible for the quality of all raw material entering the production stream. Not only was she not carrying out the vendor audits thoroughly but would always find someone to blame and never accept responsibility for her poor actions even though it was plainly obvious that the defects getting to the production line were because she was not effective.

The Company had not done her the service of informing her of her sub-par performance and I would not just fire her without helping her become the employee the company needed. This smacks of a lack of leadership from her previous line managers, which in turn shows a lack of organizational justice (Principle 1), aligned with tikkun olam and they had certainly not used every interaction as an opportunity (Principle 2) as I taught, mentored, and coached during 20/20 LEADERSHIP operationalization, FLC and practiced through the Plant B, RCPS, PAR project. Gwen like Kay (not her real name) became a particular focus for me to try and nurture her (Principle 9) to become a corporate citizen or at least someone who was somewhat effective in her personal growth (Principle 7), business improvement (Principle 3 and 5) and so that she could save her job. I worked hard to help Gwen. I saw her lack of competence as a direct result of the company not taking the time to understand, train, coach, or begin any improvement process with her. She felt she now had some degree of tenure having been with the company for 23 years and quite honestly, both senior management and HR were afraid of the repercussions if she was fired. However, after 6 months of intensive work (Principle 4) with Gwen with a focus of leading her using the 20/20 LEADERSHIP techniques, Gwen was not changing and worse had become belligerent in refusing to change and telling others in the business that nobody was going to change her or fire her. This affected both customer product quality and the morale of those around her.

My GM's observation was that "Gwen had made a twenty-three-year career of trying to stay just under the radar". When a supervisor or manager thought she was an issue, she was moved to another department. She had in fact started with the company as a receptionist, then moved to logistics admin, finance admin, lab tech, quality control technician, laboratory technician and eventually under my predecessor to raw materials quality supervisor. Though she shared responsibility for her performance, poor work ethic and lack of teamwork, this was not all her fault, it was also a lack of leadership courage face the problem and do 'the right thing'. Other leaders were ok with avoiding the conflict, I was not; it was not fair to the business or to her. My purpose is to always try and make each individual the best version of themselves that they can be, and so with Gwen we designed a three-month Personal Improvement Plan (PIP) that would either rehabilitate her and her performance through mentoring and coaching or promote action up to and including her removal from the business. Even with all this extra mentoring and coaching, Gwen could not see the need to change. She was convinced that I would just let her move to another department, this goes directly against 20/20 LEADERSHIP (Principle 5) and (Principle 6). However, I would not be a party to just passing the problem to another department. 20/20 LEADERSHIP does not mean a business leader is soft or overlooks deficiencies; one has to do the right things for the business and the person. At the point of her third coaching session, she reported to HR that she was being 'harassed' and she "just wanted to be left alone to do the job as she thought it should be done." This was not her call, and I made the decision Gwen would be dismissed from the company. This was exceptionally disappointing for me as I had spent considerable extra time with Gwen (Principle 4) and (Principle 11) to try and help her get to where she needed to be, but I had not managed to reach her.

Two years on, I still feel bad about firing Gwen. In the interim, I have had to fire several other individuals who 'worked themselves' out of a job. I feel badly about each of them, particularly as each of these I inherited from a previous manager who did not do the right thing (Principle 1) by the individual or the person. Even with a faith-based model, where the leader invests more than is expected to turn a person around, these people operate in a business and one has to do the right thing for the business.

A business leader cannot change every situation, and even in 20/20 LEADERSHIP there must be a critique of critical behaviours and ultimately individuals who are not willing to align behaviours with business growth must be held account. This is still business and that cannot be forgotten.

<u>Kay's Success Story</u>

When I became the team leader, Kay's employment was on the verge of termination and my first action as her head of Department was to be a witness to her final verbal warning for inappropriate behaviour. However, I saw leadership, spirit, and potential in her and decided Kay would be a focus for coaching (Principle 2) and (Principle 4) for as long as she made progress to help her move to greater self-awareness of her own potential (Principle 10) and a better career outcome. Kay has an MA in design, is bright, but clearly had a massive problem with authority. I found out that though she needed the work, she was on the verge of 'jumping ship' before being pushed. I was convinced the company needed Kay more than they knew and Kay needed the opportunity to work through her own issues which would also give her a productive career. As an authentic leader with a passion for 20/20 LEADERSHIP supporting, mentoring, and coaching I was aware that Kay would be extra work, but it would benefit both Kay and the business (Principle 2), (Principle 3), (Principle 7), (Principle 9), (Principle 10), (Principle 11).

I worked closely with Kay for 6 months, firstly coaching and then mentoring her to become a participant in and then advocate of 20/20 LEADERSHIP. After just 6 months, Kay had changed so radically that she became employee of the month (Principle 7). Though not a unique story, it was one of the most dramatic and quickest changes in an individual that I led at Company B and gave me a sense of pride in Kays improvement and satisfaction that 20/20 LEADERSHIP had made such a personal impact. Five years later she is still doing very well at Company B.

Kay's success was immensely gratifying and was an early validation of being an 20/20 LEADERSHIP leader and a demonstration of change as a result of 20/20 LEADERSHIP.

Appendix 19. Jewish Leadership Behaviours (Lewis, 2006)

Behaviour (Lewis, 2006)	Comment	Example
Piety	Informed by a sense of sacred mission, living Torah as motivation. Being a pious Jew requires following the 613 mitzvot, High Holy days and the weekly festival of Shabbat. For a secular leader, this speaks to total commitment to people process and product.	Jethro exhorts Moses to select leaders who are G-d fearing individuals. (Exodus 18:21)
Tenacity	Only those tenacious enough to withstand challenge and opposition over a protracted period can hope to be effective. As a secular leader, this speaks to not only taking the long view to achieve objectives but also taking one's followers on a difficult journey.	Moses secures freedom for Israel from Pharaoh. (Exodus 12:32)
Compassion	In Judaism, sensitivity and compassion toward followers is not a sign of weakness; it is the essence of good leadership. For a secular leader, compassion is equally valid if one is going to nurture the whole person.	The Rabbis make this point in referring to both David and Moses and their time as shepherds quoting Psalm 11:5. G-d tests the righteous by having them pasture sheep. He who knows how to bestow care on each one of them can come and tend my people. Also "When Israel is in deep distress, I must be in it with them" (Exodus 17:12)
Service to Followers	When a man enters a society, he may choose serving or ruling it. He is advised to choose the former (Walden, 1963). In a secular leader, enabling success in one's followers by meeting their needs and removing barriers is key.	If you as King will serve the people, they will be your servants always. (1st Kings 12:7)
Humility	Of all the behaviours Judaism associates with effective leaders, none ranks higher than	Joseph and Daniel both declined the praises offered to them. (Genesis 41:16 & Daniel 2:30)

	humility. A secular leader who places themselves above his team will soon find himself isolated and alone. My success had always come through acknowledging the skills and strengths of others.	
Consistency and Fairness	Followers have a duty to challenge a leader's policies when they lack consistency and fairness. Mishnah Torah 5:14. As a secular leader, consistency and fairness are key to promoting sustained success. This was key to my RAF career.	Abraham calls G-d to account for G-d's destruction of Sodom and Gomorrah, "Will you sweep away the innocent with the guilty?" (Exodus 18:23-25)

Table 28. Jewish Leadership Behaviours (Lewis, 2006)

Appendix 20. RTA 3 Data Collected in the Work-Place Transition Between the First and Second Perception Surveys

Example of Plant B PAR Change Team Meeting notes

These comments were subject to a third RTA that is reported in Part 3. The notes were collected by me or the GM, during the period between the first and second quantitative survey. This data was collected at change meetings, one-to-one coaching and via email. These comments provide for further qualitative analysis to add to the mixed methods triangulation of the effectiveness of 20/20 LEADERSHIP as a leadership model, as an agent for organizational and personal change. The PAR teams at each plant met monthly and notes can be found below. At some of these meetings leaders or team members made progress notes which are reproduced below. The discussions at some meetings were relayed to me in phone calls.

Second Organizational Justice Focus Team Meeting. 6/18/2018.

These quotes were taken from the second meeting of the OF PAR team. This was one month into the change. They quickly understood the purpose of organizational justice and the following quotes reflect their growth and openness to this new concept.

"We need to care about employees' training."

"We need to coach, not tell."

"We need to bring focus to training."

"This change process and amount of communication is a paradigm shift."

"We must take the time to explain why we do things."

"This change is impacting other parts of our business like how we treat temps, our formal training plan and our established staff turnover."

The Plant Manager and his shift supervisors had become very animated about change. This energy was self-motivation and key to them sustaining change in their social groups.

Third Organizational Justice PAR Meeting Minutes of July 2018

The key points were recorded for me by the GM and are reported below. (Notes in brackets are my additions.)

1. GM: "Organizational justice must be owned, right down to each production line. Each production line has specific things for which they need to be held accountable." This includes the effectiveness of the line but also for other such things such as cleaning and preparation for the next shift. (To help with this, I will be working with the teams to develop standard work and a shift handover process. 20/20 LEADERSHIP has been the catalyst for change; the teams now need help with the technical aspects of the business.)

2. "We have no process to provide machine cover when key people go on vacation." (20/20 LEADERSHIP is influencing many areas of the routine operations of the business. The questioning of the vacation process has come out of looking at equity in the attendance policy. This is in regard to both transparency and fairness.)

3. "J is on vacation so line 1 is now running irregularly." We were not prepared for his absence. The teams and the leadership recognize that we do not have experienced personnel to cover periods of vacation or sickness. With a high turnover of personnel, the business is often only one person away from shutting down a production machine. (They needed a trainer to give basic training and then cross training to give strength and depth.)

4. S said that, " If M is out on first shift, that there is a difference in machine readiness when I come in for my shift. It is very apparent that the previous shift struggled." Key to organizational justice is everyone knowing what to do and then doing it. Doing the right things and then doing things right. (This increase in awareness of what the business needs to be successful is very positive. The growth of my leadership has been a journey paralleled by my spiritual journey as was the purpose of this study.

5. All personnel responded HIGHLY to the need for a formal training program for employees – specifically a designated trainer. The plant manager observed that, "We need to care about training," and (Because of this 20/20 LEADERSHIP project, a new job was created for a training manager in Plant B.)

6. Operators and cutter crews feel that they are at odds with each other over speed of machine set-ups. They believe there is a performance and a safety issue. (This is a great opportunity for business improvement, identified by the workers and raised to leaders through communication and mutual respect.)

7. Everyone agreed that each production line has a weak spot with which there is a constant struggle. S observed that everyone has a strong point and weak point. (This is a great observation that would not have come about without the work of this project. Individuals are engaging with each other in conversation, are really listening to reach other and relationships are being formed.)

Fourth Meeting of the Organizational Justice Team - August 2018

Though each PAR team focused on one area, the amount of overlap between the organizational justice team and the other two teams grew at each monthly review as organizational justice impacted change at every level. The focus at the fourth monthly meeting was working on processes that will support parity between PAB and spiral. The following is a memo from one of the 1st line supervisors because of one of these changes.

> From: J2
>
> To: Plant Manager,
>
> Date: July 25, 2018 7:14 AM.
>
> I have been using the evaluation form to review personnel over the past couple of days. In seems beneficial in understanding an individual's knowledge on pertinent issues. I think it will help each employee become more productive and understand that there is structure within our plant. If we utilize this tool, it not only helps us but makes an appearance of being more competent and professional.

Once I collated these data, I met separately with each Plant's leadership to discuss the findings. The leadership teams in both plants agreed with the initial perception survey results, which was a useful reality check that the data in the perception of the leadership was directionally correct. The results were immediately published on information boards in both plants and were equally received as reflecting the experience of the employees.

On at least a monthly basis the researcher worked with the 20/20 LEADERSHIP students who had chosen him as their mentor. Below are updates that came from these students by way of coaching sessions.

1. K, who was one of the first line supervisors that attended the three-day 20/20 LEADERSHIP operationalization training, is coming to the end of his project. He recognized it took around two hours to find product to load onto the trucks. He has reorganized and labeled the warehouse into lanes, so production know where to place product and the warehouse staff know where product has been put, thus reducing turnaround of loading trucks by up to two hours. This will have a major impact freeing up docks spaces and improving on-time shipping. K has improved business efficiency considerably and became a mentor for a second PAR cycle on this same project.

K, "Thank you for taking the time to stop and talk when I was having a bad day." This incident had happened 6 months previously, before I began this project. I had forgotten this incident as it was just one conversation whilst on my daily rounds.

2. T2, another of the students on the operationalization training is also coming to the end of his project in the skid shop and has made the organization much more efficient. T2 reports that, "We were able to get our new guy hired on I am working with him to get him to understand his responsibilities and overall don't want him just to relax now that he is hired. I am trying to back off a little more on working on the floor and letting the guys take responsibility of getting stuff done in a timely manner although this is sometimes hard to do with our small group. We still need to improve on the vacation situation as far as more frequent training for the guy that fills in for me and also receiving help from converting when someone is off hopefully me and Jason can get something going for that issue, Thanks, T******.

T2 Was able to persuade his leadership to bring in a new helper. As a result, he is able to take time to be strategic.

3. M2 is a third 1st line who was on the operationalization-training course. Here is what M2 has to say;

"My project is getting the operators taking lunch and breaks on time and getting back on time. At first, I tried to talk to my people about the time they are supposed to take, it would go in one ear and out the other so finally I started taking breaks with them. I would go at the right time and come back at the right time. I would say it is time to go back to work we would walk out of the break room together. Now it is working good sometimes I sit on the back of a machine to see if anyone is lagging behind; if so, I say something but most of the time they are getting back on time (sic).

M2 is now leading by example.

Plant B - Attendance and Communications Team Actions

Table 29. are notes written by the General Manager of Plant B that record one of the Attendance team's PAR meetings. He took ownership of the three change teams in Plant B, collating the three team's actions and ensuring they were all completed using the leadership principles of 20/20 LEADERSHIP. These leaders made a real effort to learn how to listen and how to teach the team to change through building bridges.

Employee Engagement Action Items						
13-Jul-18						
Issue Numbe	**Status**	**Date Due**	**Owner**	**Topic**	**Description of Issue/Action Item**	**Action required**
1	**Open**		Sharonda	Attendance	Kronos clocks not sync'd and not accurate	Calibrate both clocks to correct time Develop process for periodic calibration
2	**Open**		Travis	Attendance	General clocks throughout plant not sync'd and not accurate	Calibrate both clocks to correct time Develop process for periodic calibration
3	**Open**		Eric/Travis	Attendance	Notification of work beyond normal schedule is too abrupt	
4	**Open**		Eric/Travis	Attendance	No attendance standards for temps	
5	**Open**		Travis	Attendance	Better tie in to safety for Temps	
6	**Open**		Eric	Attendance	Add SafeStart states/errors/certs training to day 1 material	
7	**Open**		Eric	Attendance	Review attendance policy with the whole plant	
8	**Open**		Sharonda	Attendance	Place laminate copy of attendance policy at time clocks	
9	**Open**		Sharonda Travis	Attendance	Develop system for communicating points to employees	
10	**Open**		Sharonda	Communicati on	Staff and team meet to review findings	
11	**Open**		Travis	Org. Just.	Staff and team meet to review findings	
12	**Open**		Eric	Communicati on	Communicate Attendance team items	Post Action log and review in Q2 review meeting
13	**Open**					
14	**Open**					

Table 29. Plant B Attendance Team Actions.

Appendix 21. Abbreviations and Definitions

Sacred Definitions	
Arc	Cabinet on the East wall of the synagogue that holds the Torah scroll
Aliya	Aliyah is the immigration of Jews from the diaspora to Israel. Also defined as "the act of going up"—that is, towards Jerusalem, or 'going up' to the shulchan to read from the Torah.
Bar Mitzvah	Bar Mitzvah is a coming-of-age ritual for boys at the age of 13.
Bat Mitzvah	Bat Mitzvah is a coming-of-age ritual for girls at the age of 12.
Chesed	Random acts of loving kindness.
Gemara	The component of the Talmud comprising rabbinical analysis of and commentary on the Mishnah. After the Mishnah was published by Judah the Prince (c. 200 CE), the work was studied exhaustively by generation after generation of rabbis in Babylonia and the Land of Israel. Their discussions were documented in a series of books that became the Gemara, which when combined with the Mishnah constituted the Talmud.
G-d	Used throughout is the Conservative Jewish tradition of not using vowels to spell out the name of the Deity. According to the medieval commentator, Rashi, we should not erase or destroy G-d's name and should avoid writing it. The concern is that the name of G-d may be printed out and later the paper thrown away, rather than disposed of according to Jewish tradition by burial in genizah in a Jewish cemetery.
Halakha	The collective body of Jewish religious laws derived from the written and Oral Torah.
Kehila/Kehilot (pl)	Sacred community

Kosher	Food sanctioned for consumption according to halakha. Among prohibited foods (trief) are pork and shellfish, mixtures of meat and milk in the same meal, and the commandment to slaughter mammals and birds according to a process known as *shechita*.
Midrash	The name given to a group of expositions on the Torah. Several midrashim teach about Jewish leadership. In Judaism, midrashim are the genre of rabbinic literature which contain early interpretations and commentaries on the written Torah and Oral Torah (spoken law and sermons), as well as non-legalistic rabbinic literature (Haggadah) and occasionally the Jewish religious laws (halakha). These form a running commentary on specific passages in the Tanackh and were written primarily from 400 to 1200 CE.
Mishnah	The written collection of the Jewish oral traditions known as the "Oral Torah".
Mitzvah	1. Any of the collection of 613 commandments or precepts in the Bible and additional ones of rabbinic origin that relate chiefly to the religious and moral conduct of Jews. 2. Any good or praiseworthy deed.
Parshat/Parashah[18]	A passage in Jewish Scripture dealing with a single topic specifically a section of the Torah assigned for weekly reading in synagogue worship. The King James addition of chapters and verses is used in this report for convenience.
Rabbi	Teacher of the Torah. Importantly, not a priest or leader of the congregation.
Rebbe	Menachem Mendel Schneerson, known as the Rebbe, was a Russian Empire–born American Orthodox Jewish rabbi. He is considered one of the most influential Jewish leaders of the 20th century

[18] As with many Hebrew words translated into English there are many spellings used across different sources.

Shabbat	Judaism's day of rest and seventh day of the week (Saturday in the Christian week), on which religious Jews remember the Biblical creation of the heavens and the earth in six days, the Exodus of the Hebrews, and look forward to a future Messianic Age.
Shul	Yiddish for school, used by Jews of North Eastern European decent as the name for their meeting place.
Schmoozing	Usually over food, spending time with others and engaging in small talk.
Shulchan	Table at the front of the synagogue where the Torah is unrolled to be read.
Synagogue	Jewish house of assembly or house of prayer.
Talmud	The generic term for the documents that comment and expand upon the Mishnah ("repeating"), the first work of rabbinic law. The Talmud, which contains the teachings and opinions of thousands of rabbis dating from before the Common Era through the fifth century CE on a variety of subjects mentions that the Jewish People were given 613 mitzvot at Sinai. Examples include such diverse acts as having children, declaring G-d's oneness, resting on the seventh day, Tikkun Olam, not eating pork, wrapping tefillin on the arm and head, building a temple in Jerusalem, appointing a king, obeying the sages, and providing interest-free loans.
Tanakh	The Tanakh, the Hebrew Bible, is the canonical collection of Jewish texts, which is also a textual source for the Christian Old Testament. Written mainly in Biblical Hebrew, with some passages in Aramaic. Consists of twenty-four books and is an acronym of the first Hebrew letter of each of the Masoretic text's three traditional subdivisions: Torah ("Teaching", Nevi'im ("Prophets") and Ketuvim ("Writings")—hence TaNaKh.

Tikkun Olam	Hebrew for “world repair” has come to connote social action and the pursuit of social justice. The phrase has origins in Torah and classical rabbinic literature.
Toda raba	Thank you
Torah	The five Holy books of Judaism traditionally given by G-d to Moses on Sinai: Genesis, Exodus, Leviticus, Numbers and Deuteronomy.
Tzdacha	Literally meaning "justice" or "righteousness", but commonly used in Judaism to signify charity as an ethical obligation.
Yasher Koach	An idiom literally meaning “may your strength be firm”, usually thought of as “Good job!” It carries with it the hope that this mitzvah will give the receiver the strength to carry on to future mitzvot.
<u>Secular Definitions</u>	
GM	General Manager
PM	Production Manager
PS	Production Supervisor
QMS	Quality Management System
QS	Quality Supervisor

Table 30. Abbreviations used in this Thesis.

Appendix 22. Using Lean Manufacturing in Organizational Development.

The key model for OD employed by the companies in this research was Lean Manufacturing. My experience leads me to believe that the key problem with companies such as Company B and C in this research, that focus on Lean manufacturing principles as a vehicle for organizational development is that Lean is about process not about people; and it is people that are the heart of successful and sustained change. Great processes are just wallpaper if they are not engaged with by people. Lean is designed to improve quantity, quality, and process speed, not the organizations people in their social setting (Scoggin, 2017). Despite widespread interest and research discussing the obstacles senior managers face when implementing lean processes, there is little understanding of how OD and change theories relate directly to Lean implementation, (Scoggin, 2017). Lean operations that have demonstrated success understand and better utilize soft practices (in this I posit 20/20 LEADERSHIP is such a practice) associated with the social component. These soft practices include concern for people and their relations, concern for team building and problem solving within a continuous improvement ideology. These are contrary to those organizations whose views are restricted through a strictly technical lens (Bortolotti, et al., 2015). Successful lean transformations, not unlike other cultural transformations, require fomenting a collectivistic atmosphere where employees and Lean teams alike challenge status quo processes while learning new methods, (Scaffede, 2002). Such a team-work culture must be fostered prior to initiation of Lean or at least in parallel with Lean to ensure continuous improvement sustainability (Liker and Convis, 2011). PAR under 20/20 LEADERSHIP is such a team-work culture. Using PAR across the leadership/worker power paradigm will mitigate such problems as that reported by Scherrer-Rathje et al. (2009) where they saw bottom-up lean implementations in manufacturing plants as producing a lack of senior management commitment, lack of team autonomy and lack of organizational commitment. Senior managers are often the focus of organizational change, but middle level managers and work group leaders, (such as those in the Lean teams in Part 3), are also significant sources of change (Griffen, et al., 2004).

Bhasin and Burcher (2006) conducted a literature review which revealed 10% or less of companies succeed at successfully implementing the lean methodology while Taleghanis, (2010) in Scroggin (2017) stated only 10% or less of manufacturing companies succeed at implementing all its practices and Bicheno and Holweg (2009) suggested less than 10% of successful British manufacturing companies fully adopted the lean manufacturing management system. Managers and lean practitioners’ lack of OD understanding may be a contributing factor to the low implementation success rate of implementing and sustaining Lean successfully. Pinedo-Cuenca and Olalla (2012) established a connection between continuous improvement, critical success factors and Lewin's organizational change theory and noted a great deal of consistency between successful Lean Six Sigma implementation and the antecedents of successful organizational change. So, if used intelligently Lean tools can be used for business improvement, though to maximise the potential of the tools they must be part of a focused OD program of which 20/20 LEADERSHIP can be a major part. Several Lean manufacturing tools were used daily in the preliminary projects in Company B and the formal project in Company C as vehicles combined with 20/20 LEADERSHIP and Participatory Action Research (PAR) for implementation of OD. These tools included:

a. Visual Management. A tabulated visual display or control chart that gives instant presentation of current production against target and associated barriers if production does not equal target.

b. GEMBA. A production floor-walk by senior leadership to meet with production supervisors and operators to understand production to target and what leadership needs to do to resolve problems outside of the span of control of the machine operators and supervisors. Each production cell is visited, and a standard set of KATA questions are asked of the cell team, (Rother, 2010).

1. What is the target?
2. What is the actual?
3. What are the barriers?
4. When can I expect to see a change?

True engagement demands more of the leader (Principle 11) than the basic questions, and thus I always ask a further question.

5. What else can I do to help you?

This further open question elicits people focused responses that consistently provide opportunities to remove barriers (Principle 8) build relationships and open up opportunities for nurturing, mentoring, and coaching (Principle 1), (Principle 2). The result on one occasion that I asked question 5 on a Gemba at Company C Plant B lead to an increase in production of 30%. The team was actually achieving production, so the first 5 questions were asked without any action. The stacker at the end of the process that took completed production off the machine conveyor and put it on pallets answered question 5 as follows. "If we had an 18" wide conveyor rather than an 8" conveyor we could increase the machine speed as we could handle more product. Machine 3 has an 18" conveyor that they do not use." As the teams had been instructed not to leave their positions, they could not collect the conveyor and bring it to their machine. I collected the spare conveyor and helped them connect it to the machine. They were then able to speed up the machine and consistently exceed the production target. The extra question and extra effort had a direct impact on team building, nurturing relationship building and production throughput. (Principle 1), (Principle 2), (Principle 3), (Principle 7), (Principle 8), (Principle 11).

Another example was based on Plant B, Team 3. Team 3 worked long hours in difficult circumstances. One of the routine actions of the team leader was to update the visual management control chart of actual compared with target production. Initially this was rarely completed and if it was, it was inaccurate. The team leader would often just write what he thought the senior leadership wanted to see. This was a low level of participation that I needed to work through with the team so that they engaged with the process. I needed to deepen their level of participation and in the spirit of 20/20 LEADERSHIP asked them my extra fifth KATA question, "What else can I do for you?" The team leader explained that for some time they had needed a wash basin at the workstation to wash off printing ink, but none was forth coming. I explained that I could not make any promises, but I would make representation to the line manager. The team leader replied, "Even if you can't get a washbasin for us, thank you for listening," (Principle 2). Though I could not have a sink installed as there was a concrete floor that could not be drilled to provide drainage, this was a turning point in my relationship with the team. On a subsequent Gemba, the team leader asked if he could come in on the weekend to strip the printer unit down cure the leaks and thus remove the need for a wash basin. I did not have the authority to say yes so asked the General Manger. Not only did the GM say yes, but that rather than the team leader complete this work in his own time, that the company would pay the hourly rate for his efforts. This showed how team participation had deepened and had moved to a medium level of participation. Trying to provide a washbasin was my attempt to remove a barrier but building relationships (Principle 2) removed several other barriers, (Principle 8). Carrying on this level of relationship building with the team led to a high level of participation. In one example the team became decision makers in a value-stream analysis exercise reducing the machine set-up time from 93 minutes to 19 minutes. Part of this time reduction when recognized that there were too many serial real-time actions in setting up the machine between product runs. They suggested that tools be moved from the remote tool store and placed at point of use on the machine which drastically reduced unnecessary journeys. They also devised an on-call system for maintenance to be ready at the machine ahead of set-ups via a paging system, and also a key member of the team offered to come in three hours early on a Monday to set up other previously serial activities. This level of extra effort (Principle 11) that turned serial into parallel activities was not only a demonstration of high-level participation but also increased production by reducing change overtime by up to an equivalent of an extra day per week.

There were several other examples of this deepening level of participation found on Gemba due to training and modelling 20/20 LEADERSHIP. For example, one of the printer teams, having seen production increase because of the Gemba KATA questions and visual management, asked if they could change the production targets from tons to linear feet. This was due to it being impossible to make the tons when printing on narrow sheets and easy to make tons when printing on wide sheets. Using linear feet as the metric for production maximized machine throughput at optimized speed so they had a fair target to achieve. This was **their** suggestion which showed **their** deepening level of participation due to operating 20/20 LEADERSHIP, building relationships with the teams, building organizational justice (Principle 1) and fairness (Principle 6) through understanding their issues and building relationships over time (Principle 4).

Other examples from the Gemba include how initially teams avoided conducting or being involved with Root Cause Problem Solving exercises (RCPS) which was a (low level of engagement). Over time they became willing volunteers in RCPS as participants (medium-level participation), bringing specific technical knowledge, to two team members becoming accomplished leaders of RCPS (high level-participation) at the machines, and looking for opportunities to exercise this new technique. These deepening relationships were a product of 20/20 LEADERSHIP, PAR and time, (Principle 4).

c. Root Cause Failure Analysis. A deductive participatory method to analyse a failure down to its root cause and then put in place recovery actions to ensure no re-occurrence of the same failure under the same set of circumstances.

i. Extensively discussed in Part 3.

d. Operator Basic Care. A philosophy of giving the machine operator total control and responsibility for the running of his machine by providing extra training on how to set-up and maintain their machine.

i. In Company C Plant A, this began with striping down the machine to carry out deep maintenance as a baseline on which to build OBC. In this example the dirtiest job was cleaning out the hydraulic pump under the machine. Nobody wanted to do this job, so I took the opportunity to lead by example and took it on. That one of management was willing to do the worst job and lead by example without fuss had a great impact on the operations team. (Principle 1), (Principle 2), (Principle 3), (Principle 5), (Principle 8), (Principle 9), (Principle 11), (Principle 12).

ii. Construction of technical manuals is a particular skill for which I am trained, however I do not have the technical knowledge of the machines. We could combine my training with their practical knowledge. I explained to the machine operators the purpose of OBC and how the new manuals would help them. The operators were impressed that leadership cared enough to make their days better and were keen to help. They were also pleased to be asked to help. Once the manuals were completed the machine operators took full ownership for their use and upkeep. (Principle 1), (Principle 2), (Principle 3), (Principle 7), (Principle 9). These examples set the tone for the rest of my engagement that built relationships, trust and respect. Furthermore, the OBC manuals had a direct impact on reducing downtime and increasing OEE.