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Automation and Mechanics: How it Affects Employee Perceptions and Relationships at Work

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Abstract

Automation, and new technologies, have become well-known terms over the last few decades but with this new "fame" a few negative aspects as well. Automation has always carried a particular shadow of fear wherever it went. This fear includes the anxiety of replacement, the fear of unemployment, the fear of conflict between employees and employers and the fear of losing valuable relationships at work if it were to be implemented. In South Africa, seeing as though South Africa is still a developing country, employees have not yet experienced the full impact of automation as in developed countries such as America, China and England. Automation has only been implemented on a small scale in some companies. Nevertheless, these small scale implementations still caused a negative ripple throughout the business sector of the country. Employees perceived automation as being a problem that will only lead to an employee being replaced or losing his or her work. The phenomenological study was done using qualitative research by interviewing low-level employees and their managers/employers. The interviews focused on how employees perceived the various factors of automation. The primary objective of this study was to identify the perceptions that employees had of automation and how they feel automation will affect their world of work. The researcher examined various ways that automation influenced the labour market regarding employees, especially low skilled workers. The results of the study showed that even though automation is still relatively new in South Africa, employees always feared its presence.

Keywords: Automation; New technologies; Unemployment; Fear; Replacement; Relationships; Conflict.

1. Introduction

When asking an employee, be it white-collar or blue-collar workers, how they feel about the implementation of automation or new technology, they will probably give you an answer from both sides of an argument. In other words, they either say that automation is an excellent step to take and will lead to many benefits or, automation will only result in high levels of unemployment and other types of problems. This leaves most employers in a sort of a conundrum when having to make a confident decision regarding their company's future.

Unfortunately, employers have little choice but to start looking towards implementing new technology and to automate most of their production processes (Manyika *et al.*, 2017). This is one of the few roads to follow to ensure the future survival of their company. With this type of decision ultimately made for employers, it can have some dire consequences for employees (White, 2017). In recent years there has been a 'boom' of new technology, artificial intelligence, automation and robotics, with all these new developments it is quite hard to keep up with trends that seem to ingrain themselves in every company around the world (Shewan, 2017).

Various employees showed great concern for their position in the company where they are currently employed. Employees perceive automation as this significant problem that will replace them and that their employers will no longer allow them to prove that they can be of use. Most of them are correct in this assumption, as we have seen with the McDonalds incident where automatic machines replaced thousands of employees, leaving employees with no option but to accept these new changes and to start looking for new employment elsewhere (Schawbel, 2015; Tankersley and Fung, 2016). This unemployment trend of McDonald's did not stop there, in a recent news article in introduced its idea of implementing digital ordering kiosks that will leave employees in more than 2 500 restaurants without employment by the end of 2017, this number will keep increasing to a total estimated 3 000 more restaurants by the end of 2018. These types of unemployment levels should ring some alarm bells for employees (Durden, 2017).

This is just the beginning of how outrages the employment levels will fall in times to come if there are no regulators in place to ensure that there is some limitation to how many employees' employers may let go, this includes dismissals due to operational requirements. Employees' retrenchment is one of the main effects of automation (Hlatshwayo, 2017). The biggest international trade union, IndustriALL Global Union, stated the following (IndustriALL, 2016): "Technological changes in the workplace have deep social implications, as

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temporary and casual work risks to spread further, unemployment runs high, wages are low and workers' rights attacked". There is also the problems that arise between the remaining employees of the company and their manager; these problems include; conflict, fear, lack of communication and reduced support due to limited human interaction.

1.1. Research Objectives
The following research objectives are formulated based on the description mentioned above of the research problem:
- To obtain through a literature survey, the attitude employees have toward automation;
- To obtain through interviews the perception that employees have of technology, in terms of automation, and their disposition to adapt;
- To disseminate empirical, the results.

2. Research Design
2.1. Research Approach
A qualitative approach was utilised in the article. According to Maxwell (2012), the strength of qualitative studies comes from focusing on "specific situations or people, and emphasis on descriptions rather than numbers…"(p.30). Qualitative researchers place a high value on the perceptions of participants, using these perceptions as the reality of their experiences and attitudes towards specific events and situations (Eriksson and Kovalainen, 2015; Henning *et al.*, 2013; Heppner *et al.*, 2015; Maree *et al.*, 2016).

Phenomenology does not mean to empty one's mind; it means to create a better understanding of a participants' experience for future readers to have an in-depth sensitivity towards the behaviours and feelings of the participants (Sauro, 2015; Van Deurzen, 2014). Researchers conducting phenomenological studies have a very intricate relationship with their participants (Van Deurzen, 2014). Van Deurzen stated that "We use our capacity for feeling into their experience, help them amplify it, feel it more deeply and describe it more completely" (p. 74). In other words, this is about sharing in someone else's experiences, to help them feel it more intensely and to give a better description of the experience.

2.2. Research Method
2.2.1. Research Setting
The research focused on employees working at assembly plants, factories and retail stores. All the interviews were held behind closed doors. The interviews were conducted on the premises of the assembly plants, factories or stores within a conference room.

2.2.2. Target Population
The target population consisted of thirteen people from an assembly plant/factory in Vanderbijlpark. Of the lower-skilled workers using new automated processes/machinery, 11 participants were selected, the remaining 2 participants consisted of the managers/employees of the lower-skilled workers.

2.2.3. Sampling
Qualitative researchers use sampling techniques that will allow them to obtain a deeper understanding of the phenomenon that they are currently studying (Blackstone, 2012; Eriksson and Kovalainen, 2015; Henning *et al.*, 2013; Maree *et al.*, 2016). This study used non-probability sampling. Non-probability sampling refers to the fact that the likelihood of a person being chosen as a participant is unknown, but this does not mean that participants are only chosen ubiquitously, there are various categories of sampling that a person can be selected under (Blackstone, 2012; Maree *et al.*, 2016).

A Stratified Purposive sampling method was used in this study. The sampling technique refers to a list of characteristics or perspectives that you wish your participants to have to obtain your main research objective (Blackstone, 2012). This method also helped identify the participants with the most knowledge of the phenomenon taking place (Elo *et al.*, 2014). According to Ritchie *et al.* (2013) "Purposive sampling is precisely what the name suggests. Members of a sample are chosen with a "purpose"- to represent a type about key criterion" (p. 113).

This stratified purposive sampling method was used to choose the first 6 participants who must fit the criteria of being low skilled workers, with little or no experience handling highly automated processes especially working with human-machine interfacing, in other words, they must have experienced some difficulty when operating the machines.

The same method was used to choose the two managers or supervisors that are in charge of the lower-skilled workers.

The rest of the participants were selected using a Snowball sampling method. According to Wig *et al.* (2014) "Snowball sampling works on the assumption that members of a population of interest are typically able to identify one another via shared relations (e.g., a social network of musicians in a community)" (para. 9).

In other words, there were a total of thirteen participants. Eleven were employees, and two were employers/managers.

2.2.4. Data Collection Procedure

Using a qualitative research method allows the researcher to use different techniques to obtain information. The following section will describe the methods used to get information through semi-structured interviews:

The phenomenological study will be conducted in the form of semi-structured one-on-one interviews. For this study, the interviews are recorded digitally with the participants' permission.

According to Isaac (2015), using recording during interviews:

Is an excellent way to capture qualitative data in thesis or dissertation research and ensures descriptive validity. While taking notes and writing down your observations is essential, you're likely going to miss out on some details. An audio recording of an interview also allows you to refer back to the interview and take a fresh look at the interview data.

This method helped reduce the risk of losing information while taking notes during the interviews.

2.2.5. Pilot Study

To ensure validity and reliability, questions were piloted on a small group of low skilled workers, employed in a highly automated industry, before approaching the target group. This was done to test whether any of the questions are ambiguous, and if the participants interpret the question differently.

2.2.6. Data Analysis

For this study, a combination of qualitative coding and content analysis was used. The qualitative data analysis framework (Huberman and Miles, 2002) was used as a guide for the analysis of the data. Miles and Huber use three different activities to analyse data, namely; (1) data reduction, (2) data display and (3) data drawing/verification (Huberman and Miles, 2002). Thus information that was obtained is:

- Transcribed
- Read and reread
- Unnecessary information will be removed.
- Repetitive data will be highlighted
- Conclusions will be drawn.

For the study, Microsoft Excel was used to analyse, reduce and interpret the data.

2.2.7. Data Presentation

When presenting data, it is essential to ensure that it is appropriately reported and systematically while paying careful attention to how connections between data and results were made (Elo *et al.*, 2014; Eriksson and Kovalainen, 2015; Maree *et al.*, 2016). Qualitative researchers allow themselves to form part of their writings, unlike quantitative researchers. According to Ritchie *et al.* (2013) when reporting on qualitative data the aim was to "explore, unravel and explain the complexity of the findings engagingly and insightfully while at the same time producing an accessible and coherent narrative." (p. 36).

3. Discussion and Finding

As mentioned above, there are various reasons why employees fear automation to such an extent (Zaino, 2017). Participants feared being replaced by machines most of all (Smith, 2016). These fears revolved around the fact that if they lost their jobs shortly, then there will be no one looking after their families and that they will become irrelevant regarding the workforce needed in the years to come (Thompson, 2016).

Participants' perception of automation was immensely negative when looking at its effects on unemployment, replacement and overall fear of change (Soergel, 2017). Most answers within the interviews with employees revolved around them, expecting to lose their jobs to automation and not having the opportunity to prove themselves as valuable (Hernandez, 2016). According to them, they will become absolute when they have to compete against a machine's faster time and better production.

It has also come to light that employers find automation an excellent step to take to ensure, not just the success of their company, but their complete survival. This does not mean that automation is an easy decision to make, employees have worked for a long time with employees who will maybe lose their job, leaving conflict, friction and a sense of sadness if these relationships will be affected.

Theme 1: Perception of automation
Theme 2: Employees vs employers
Theme 3: Lack of job security
Theme 4: Impact on relationships

3.1. Theme 1: Perception of Automation (table 1)

An overall negative sense relating to the impact of automation was observed (Table 1). The negative perception included: The most overall *attitude* participants had toward automation and how *uninformed* employees still are in regards to automation, its benefits and its adverse effects (Chartered Institute of Personnel and Development, 2017; Florian, 2015; Musakaruka, 2017; Shewan, 2017).

Attitudes can either positively or negatively affect an employee's behaviour, irrespective of whether the individual is mindful of the effects (Heider, 1946), this study shows that the employee's attitudes lead to negative

behaviour. According to the interviews, participants mostly saw automation in a negative light. Most of the perceptions revolved around the fact that they feel new machines will cause problems regarding their job security (Chartered Institute of Personnel and Development, 2017; Musakaruka, 2017; Shewan, 2017).

Employers walk a fine line between ensuring the prosperity of their companies and keeping their retrenchment levels to a minimum, especially in such a vibrant technological era such as the 21st century (Shave *et al.*, 2017). In other words, automation will likely be a more informed choice to make for the survival of their company when looking at all the increasingly positive production levels that accompany them (Stieber, 1966).

Lack of information or knowledge regarding automation (Table 1) can lead to employees making wrong assumptions regarding the impact of automation (Gibbs, 2017; Hernandez, 2016; Marsh, 2017; Smith, 2016). According to Craig (2013), people make assumptions based on events that took place in the past with similar results "The truth is that there are no guarantees of anything in life. We manoeuvre through our lives, assuming outcomes."

When making assumptions within the workplace, it can have disastrous consequences (Sturt and Nordstrom, 2017). Without the proper information regarding the advantages and disadvantages of automation, the participant only assumed the worst of automating the workplace (Craig, 2013).

Table-1. Theme 1 Perception of *automation*

Sub-theme	Associated keywords
Attitude	I genuinely do not like that because of how many people in South Africa is already without work, and now they only bring in more and more machines and more and more people will be without work. I do not think automation is going to help people. It is a bad thing. I'm going to feel wrong about new machines. It's going to give us a problem. They have no place to go. I do not feel okay. So I'm not going to say it is scary, not exciting. Yes, and I feel stressed. Yes, I was scared. It is not helpful at all, yes it will affect me very badly. I'm going to feel bad. Yes, I will say it has an impact. They do not give us a chance to prove ourselves. It was not right; the company should have done more to keep us. I think we should work with people rather than technology because for technology there must still be people to work with the machines etc. but it is better to work with people than machines, you can't tell machines to do this or that but for people, you can yes. Remember a person that does not know what automation is will immediately have a negative attitude toward it.
Uninformed	I do not know what Automation is, so you will have to explain it. I am not sure why companies implement automation. I do not know what automation is. No, I do not know what automation is. I do not know what automation is. I do not know what it is. No, let me be honest about today's new machines and things, my honest opinion, I'm not interested. I don't know anything, but I think a lot of people will lose their work. I don't know how to answer. I believe we can continue as we are today. I think we should work with people rather than technology. How we are doing now is an excellent way to continue, I do not believe we need new machines. I think we are making an excellent way to go in the future because when they bring in the machine and people are going to lose their job, and how are you going to survive. I think about how the company is working now we can survive because machines are not right. I think we can go on like we are doing now, in our profession there will always be a job that requires hands to do the job and not machines, but it's difficult to know how the future looks. Remember a person that does not know what automation is will immediately have a negative attitude toward it. I think we should work with people rather than technology because for technology there must still be people to work with the machines etc.

A huge part of employee's attitudes toward automation is depended on the reasons employers have for implementing automation. The following theme looks at the two sides of the automation coin; in other words, why employers implement automation and why employees *think* employers implement automation.

3.2. Theme 2: Employers Vs Employees (Table 2)

There is a vast difference between how employers feel about automation and how employees feel about automation. We have already seen how employees react to automation, but how do employers see it? According to the two employees that were interviewed, their perceptions were somewhat positive toward implementing automation. Employers implement automation to stay competitive regarding increased production and less time (Bhardwaj, 2017; Farhoomand *et al.*, 1990).

Even though only two employees were interviewed for this study, they carry the same perceptions as most employers around the world, and that is to make automation and new technology part of their companies as soon as possible (Gregory and Rawling, 2016). They know the risk of becoming stagnant in their ways and not adapting to the new trends of world-class business sectors. However, automation is never a natural step to take regardless of the benefits it may hold for the company, when working with a group of people for an extended period, certain relationships are bound to be formed. These relationships hold an exceptional value, and when automation is brought into the picture, it can alter these relationships in a very negative way Levensaler (as cited in (Nusca, 2017).

According to one of the employers that were interviewed, they are put in a very difficult position and have to weigh the Pros and Cons of automation. As stated above, this study focuses on employees' perception of automation and its effects and seeing as though the participants are blue-collar workers; it is easier to understand their fear of being replaced. Some studies suggest that white-collar workers are more at risk than a blue-collar worker, in other words, employers must be careful in regards to what type of automation they are willing to allow in their companies (Jezard, 2016; Livingstone, 2015; Lohr, 2015; Markoff, 2016).

These perceptions are contradictory to most of the views that their employees have. If employers and employees cannot agree on essential things, such as the implementation of automation and its effects, then there will be animosity especially if the employees feel that the employers are not protecting them in terms of their job security (Hlatshwayo, 2012; Shewan, 2017).

Table-2. THEME 2 employees vs employers

| Sub-theme	Associated keywords
Employers perception	Companies implement it to increase production, in terms of people who do not take off work for being sick etc. Automation is there to improve production and to reduce your costs such as input-costs, salaries that your workers receive, medical aids, pension, hours lost due to absent workers etc. Now automation reduces all of those risks while being able to produce 24 hours a day. The first impression that we get from technology is that it is positive, so now you have to go and weigh the Pros and Cons and decide to which length you are willing to automate. Remember, automation is not merely there to take jobs; it was also created to work with people to help them be more productive. People have to know that it is not about making their jobs but to ensure that the company is competitive enough to survive so that the workers have a job to go back to I think from the worker's point of view; they feel anxious in the beginning, I have experienced this reaction a lot from the workers. They will start to relax when they have more confidence in controlling the machine. No, if it is correctly implemented and ensure that the people are comfortable, then any negative aspects can be reduced or eliminated.
Employee's perception of why employers implement automation.	Technologies, every time they try to improve it most notably to the benefit of the employers, it is going to be better for them to spend less because they need few people only the operators and they won't need a lot of people. From the managers' point of view, automation is an excellent step to take, but for the people working on the floor, it has an opposite effect. It can have unfavourable implication if you only implement automation without discussing it beforehand. No, no one that was replaced, but some people could not adapt to new technology and then chose to leave of their own free will. It had a negative impact because the worker thinks that they will work at that company and build up a pension, and now they have to decide to leave or adapt.

Employers usually have to implement automation to survive in a rapidly changing environment, and not because of problems with their employees. Unfortunately, this is not how the participants, namely the employees, perceived the situation when interviewed. When employers start implementing automation, employees can feel that their jobs are no longer secure, leading to various problems.

3.3. Theme 3: Lack of Job Security (Table 3)

From the answers obtained from the interviews, it was easy to see that most of the employees understood the importance of automation but still feared it immensely due to the high levels of unemployment that usually accompany it, as well as the effect that it might have on their relationships at work. To be deemed as unemployed, the worker must have the following attributes:

- They are not working, even part-time or temporary.
- They are available to work.
- They actively looked for work in the past year (Amadeo, 2017).

Colom chart 1: South Africa's unemployment rate from 2014 – 2017:

Figure-1.

SOUTH AFRICA UNEMPLOYMENT RATE

SOURCE: WWW.TRADINGECONOMICS.COM | STATISTICS SOUTH AFRICA
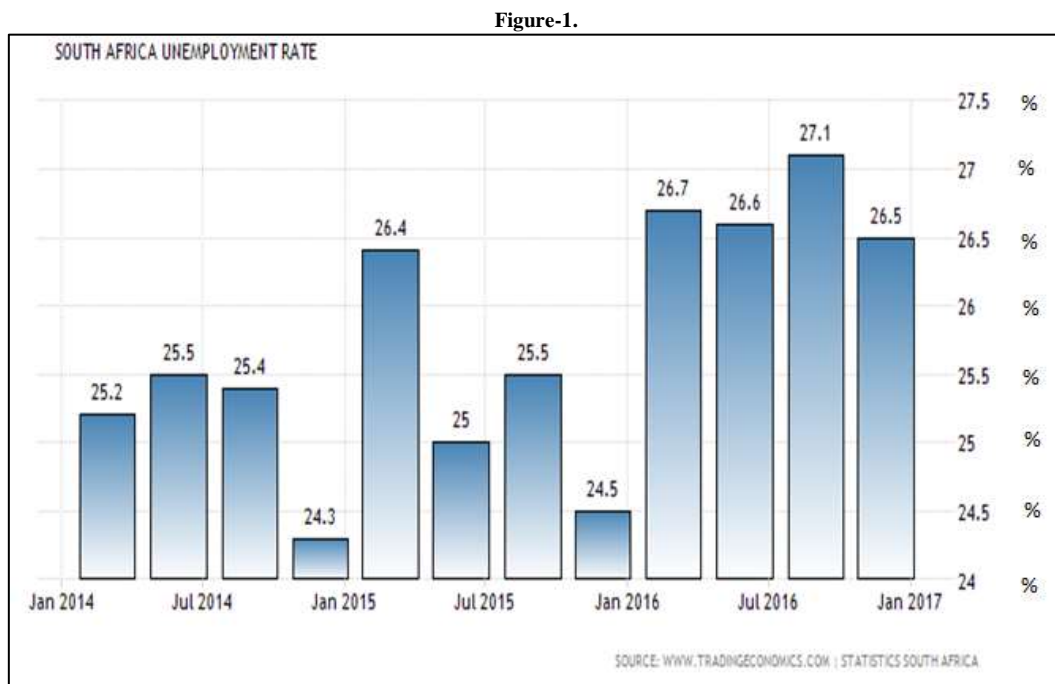
*__Source:__ http://www.tradingeconomics.com/south-africa/unemployment-rate

The above graph shows that unemployment levels in South Africa have been quite high despite the decrease of 27.1 % in 2016 to 26.5% in January of 2017, this decline is because more employees have entered the labour market (Taborda, 2017). These numbers might rise again if employers decide to rather use machines instead of employees (Cuban, 2017; Nisen, 2013). South Africa's unemployment rate will likely grow especially with the poor quality of South African's skills and see as to how future firms will require less human labour, an unemployment rate of about 50% – 60 % will not be a big shock (Fourie, 2016). Even though employers are implementing automation to survive, it does not change the fact that automation will cause some people to be replaced.

The ongoing debate on whether automation creates more jobs than they destroy is still going strong on both sides (Allen, 2015; Dvorsky, 2017; Petropoulos, 2017). People will feel more and more expendable in the face of automation if they do not learn how to make themselves irreplaceable, for as it goes great employees are not so easily replaceable (Anderson, 2013). This above statement shows that employees, including the participants of the study, know what the effect of automation on their work will be and that without adapting to these new technology changes, they will be left behind.

Seeing as how technology is perceived as a primary driver of unemployment within this study it is essential to know what unemployment regarding technology is, and how other researchers see it McClure (2017), Millington (2017), Rotman (2013), Rotman (2017),. This is called technological unemployment.

Pettinger (2013), defines technological unemployment as;

Technological unemployment occurs when a technological change causes some workers to lose their jobs. Technological unemployment is considered to be part of a broader concept known as structural unemployment. Example. When labour-saving machines are introduced into the productive process, a firm can get rid of workers and produce the same amount of goods than before. Therefore some workers can lose their job.

According to John Maynard Keynes, Technological unemployment will lead to unemployment "due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour" (Keynes, 1933).

From this study it is easy to see that the participants' point view, in terms of the effects automation will have on unemployment, it can be determined that they will never entirely accept automation in a positive light unless they can have some type of reassurance that when new machines are brought in that, they will be able to retain their positions and rather work with the machines and not just be replaced by them.

In other words, we can determine that employees look at automation through a scope of unemployment, and they will continue to do so unless the approach used to implement automation is not reformed considerably (Lindzon, 2017; Manyika *et al.*, 2017).

Table-3. Theme 3 Lack of job security

Unemployment	One person works with one machine, but one machine can do the work of many people. It will only leave people without work, if you get in more machines then more people will be left without work. So where are you going to find work? And some of us is going to lose our jobs. It's going to be a new machine we are going to lose jobs. Because they don't want to hire people. Automation is the process of replacing people with machines. I believe today it is much better than back then. In today's time, it will take fewer people, and I can promise you that. It is going to be better for them to spend less because they need a few people, only the operators and they won't need a lot of people. At the end of the day, some of us are not going to have work. Negatively, in terms of the people, they lose their jobs when the machines take over, and so they have no place to go. In a country such as South Africa, where the unemployment rate is already extremely high, the few working people are being replaced by machines, increasing the unemployment number even more. If we look at the unemployment rate now, it is too high, and if we implement the new machine, people are going to lose their jobs. And I know you'll lose your job. But I think a lot of people will lose their work. Most of us are going to lose our jobs because of automation. I was thinking of poverty for losing the job. New IT that reduces risks and the workload of people, for example, clerks had to do all the work manually, and now everything runs through computers. If the machines take everything over, how many people will sit without work? Because when they bring in the machine and people are going to lose their job, and how are you going to survive. But you have to consider the workers who will lose their jobs. We are already implementing small changes every day. In the past, where shops were operated by at least 18 people, it is now cut down to merely 4-5 workers.
Replacement	I'm going to lose my job because some of us only have matric and no other qualification. One person works with one machine, but one machine can do the work of a lot of people. I think it is machines that come it and replaces people. Automation is the implementation of the machine to replace people. It's when processes or machines replace people, and people implement automation to. Some people would have to go, and new machines need to be brought in. Because you as a worker is replaced by a machine that will do your work, so where will it leave you if the machine does all your work. Like we are many now, but the machine only requires the operator and maybe the person who is inside assisting. As I said, Automation is when machines replace people, and it relates to technology. They retrenched us so they can hire people who can do their work with a new machine. Like I said it is fewer people, only the operators and maybe the assistants and most of the people are going to be without their jobs.

After determining that employees see automation as leading drastically to unemployment and thus having a sense of replicability, we can now move on to the next theme.

3.4. Theme 4: Impact on Relationships (table 4)

The participants also felt that by implementing automation, it would have a detrimental impact on relationships, especially relationships at work (Table 2). Most of these participants have worked together for years, thus have created bonds as strong and familiar as those between family members. Automation can impact relationships in terms of the impact automation will have on *work relationships*; the impact automation will have on *relationships outside of work*.

People highly regard work relationships. Members of the McKinsey Global Institute and McKinsey & Company believes that "automation brings the promise of higher productivity, increased efficiencies, safety, and convenience, but these technologies also raise difficult questions about the broader impact of automation on jobs, skills, wages, and the nature of work itself' (Manyika *et al.*, 2016).

Looking at this perception that McKinsey Global Institute, McKinsey & Company and various other companies have, it seems necessary to discuss how automation will affect employee's relationships as well as their present skills set.

Humans inherently value relationships, thus making them social beings by nature (DeMichele, 2016; Heaphy and Dutton, 2008; Tomasello, 2014). One of the top factors that lead to job satisfaction is the relationships between coworkers; this has been an essential factor for years (Morgan, 2014). According to Ingram (n.d) "Co-workers spend

a good deal of time together, especially in team environments. It is unavoidable for employees to eventually develop personal relationships among themselves in addition to their formal co-worker relationships".

A survey that focused on employee engagement and organizational culture was conducted by TINYpulse in 2014. This survey used +- 500 companies and over 200 000.00 anonymous responses. This survey shows that the number one prominent factor influencing the work environment is coworker relationships. Employees will rather go the "extra mile" for coworkers than do it for money (2014, para. 96). This survey, as well as other articles, was conducted in order to strengthen the fact that relationships within the workplace play a crucial role in terms of higher job satisfaction (Kram and Isabella, 1985; Shriar, 2015). In addition to the TINYpulse (2014), Shriar (2015) named a few reasons why relationships are deemed crucial, namely:

The above topics show just how important relationships are in terms of support, increased motivation, enhanced communication, and properly the most important, increased productivity. These topics correlate with what most participants of the study feel will be affected if automation will be implemented. When seeing how important relationships are to employees, it is only logical to ask the question; how will the implementation of robotics affect employees and these relationships that they value so high? The responses of the participant that were interviewed reflected strong feelings of fear that their relationships with coworkers would be altered.

The responses from the interviews that have been previously mentioned, as well as the responses above, revolve around the certain perception that people have regarding automation. The information that follows shows what type of perception participants had regarding the effects of automation;

- Fear,
- Lack of communication and
- Increased conflict within the workplace.

We will now look at each perception and how it can affect work-relationships (Table 4).

3.5. Fear in Terms of Technology and its Effect on Relationships

Some of the participants have a sense of fear when thinking of automation. When talking of fear in terms of technology, it does not refer to fear of losing's one's life, rather the fear of the future and fear of the outcome of this new technology but this fear is not technophobia. According to researchers "technophobia does not involve fears such as job displacement or concerns over the effects of screen radiation, rather a negative affective and attitudinal response to technology which the technophobe acknowledges being irrational".

The participants in the interview feared the effect that automation would have on their work, especially in terms of relationships. Fear develops due to the stories that we hear (Shoshanna, n.d).

According to Shoshanna, fear can have a negative influence on relationships (para. 3):

> We become suspicious, defensive, withdrawn, calculating, and unable to live with natural trust and
> goodwill. When fear becomes intense, we see others as our enemies, and this can even grow into a
> life of paranoia. Unchecked fear poisons all relationships.

A high level of competitiveness can also arise when automation limits the number of available positions (Schawbel, 2016). Just to make things clear, a certain level of competition in the workplace can be healthy. Still, these levels of competition can quickly turn disastrous and then result in thereof can lead to high levels of fear and problems within relationships (Shoshanna, n.d).

According to Austin (2000) and the American Institute of Stress (2017), there are a few behavioural symptoms that employees exhibit when they experience fear; this includes:

- "Us versus them" talk
- Political behaviour
- A rigid interpretation of policies, procedures, and standards
- Resignation, wish for retirement or layoff
- Resistance to new ideas
- Competitiveness among employees, management
- Grievances against co-workers or management
- Lack of input or suggestions for improving working conditions
- Lowered productivity, increased mistakes/waste
- Increased absences and tardiness
- A strained co-worker and/or supervisory relationships
- Defensiveness regarding performance appraisal
- Reluctance to admit mistakes
- Indecisiveness or reluctance to take risks
- Denial of tensions and conflicts which are at or near the surface
- The pattern of reprisals or what look like reprisals against those who speak up
- Statements indicative of mistrust of upper management by employees
- Statements indicative of mistrust of employees by upper management

3.6. Lack of Communication

Communication in any company is an important aspect of everyday work (Bresnahan and Yin, 2017; Sander, 2017). There were some mentions of the importance of communicating with one another between the participants of the study and how a person can't just speak to a machine (Table 4). From the beginning of mankind, and throughout

history, the need to understand each other has been great. From drawing pictures in caves to creating little devices that can translate languages, communication has been an intricate part of all life for a century (Riemer, 2007). When different civilizations met in the past, its primary objective was to establish a way to understand each other, to learn from one another in order to survive, build and at the most thriving in the new environment.

In other words, to share the knowledge that they pose in order to better themselves and each other. The Oxford South African School Dictionary defines communication as "The imparting or exchanging of information by speaking, writing, or using some other medium" (2010, p. 120). Cameron and Spreitzer (2011), the authors of *The Oxford handbook of positive organizational scholarship*. stated that:

> By engaging in dialogue with other members, sharing information, building public goods, and becoming engaged, individuals involve themselves substantively and symbolically in the sense-making activities of the organization and move closer together in the sense of a more common understanding and a greater sense of belonging to the organizational community (p. 572).

Communication can lead to various positive influences within a business and must be a priority at all time (Riemer, 2007). Reddy (2015), listed some of the reasons why communication is a crucial necessity in everyday life; this list includes:

- Correcting wrong: Just guess there was a file to be saved and you made a small error. By saying "I am sorry for the error" will save you. It's the power of the word "Sorry" that is effective as it is part of verbal communication.
- Persuade someone:
- You need to persuade your co-worker to join up a project, then tricks of persuasion come to help. Here your verbal communication skill is there to pull him/her on board.
- Increases productivity:Without proper communication or getting the message through with the team members, it would be impossible to get the maximum output. The team that works with excellent lateral communication and group discussion brings out better results.
- Increase job satisfaction:
- Empowerment of employees through upward and downward communications is a sign of increased job satisfaction. Through the flow of information upwards in the form of feedback and if the bosses are responding by listening to them, means the employees are empowered.
- Positive effect on absenteeism:

By communicating facts and updated information from the management, downwards brings more transparency and less absenteeism.

Within the workplace, these aspects mentioned above, play a particularly complex role in ensuring the safeguarding of success within the company, participants within the study felt that communication between co-workers remains an important aspect and that communicating with machines will be virtually impossible. Communication, especially electronic communication, has had vast positive effects on business. Studies have shown that electronic communication leads to higher levels of satisfaction within one's job (Hanna *et al.*, 2017; Ten Brummelhuis *et al.*, 2012; White *et al.*, 2010).

Without communication within a company, high levels of risk will arise. A participant made the following remark if machines are implemented "*the communication is going down"*. Tuck (2014), made an obvious comment on how important communication in a company is; he stated that "At a corporate level the consequences of failing to communicate can be catastrophic". If this is the case, how do people feel about interacting with robots rather than humans?

Human-machine Interfacing (HMI) has become a relatively important method of communication within companies that want to make automation a part of everyday life. According to Schreuder and Coetzee (2010), ergonomics focuses on "the human-machine interface or the interactions between humans and systems, such as production systems, communication networks and decision-making processes".

HMI is a great way to help employees and machines to communicate with each other but with automation still relatively new; humans have not yet found one precise way to communicate with machines. One participant stated that when working when machines, it will have an impact on relationships and communication… *"I think it will have an impact on relationships because we are very close and it wouldn't be nice if some of my friends lose their jobs, and you can't speak to a machine".*

Filippi and Barattin (2015), stated that "Despite the increasing importance of human-machine interaction (HMI) in design, there are not reference models defining and describing design activities where users are directly involved in the team".

With this above statement, you can see that even if there are programs to help with communicating with machines, it does not mean that it will include all employees. When an HMI program is well designed it makes using the program instinctual but if it is not well designed it can alienate employees and that can lead to lower levels of production as a result of human-errors made (Pannone, 2010).

3.7. Increased Conflict Within the Company

There are, and always have been, controversies accompanying automation according to Roser (2013), the benefits of automation usually carry negative aspect, he listed the following examples:

- Honoré Blanc (1736–1801) developed the first interchangeable parts for musket production in France. While this would have significant benefits for repairing weapons in battle, the primary reason was to take power away from strong-minded, independent weapon smiths.

- Louis-Nicolas Robert (1761–1828) developed the first continuous paper-making machine (the Fourdrinier machine) primarily to get rid of annoying workers.
- Frederick Winslow Taylor (1856–1915) stated that "*it would be possible to train an intelligent-gorilla to become a more efficient [worker] than any man can be.*"
- Henry Ford (1863–1947) complained, "*Why is it every time I ask for a pair of hands, they come with a brain attached?*"
- Management in the chemical industry was faced with a wave of strikes during the 1950s. They were absolutely thrilled when they found that their computers and automated systems allowed them to run at near full capacity without any workers but only the managers.
- CNC machines during the 1950s and 1960s also lured many customers with the dream of becoming independent of headstrong specialists.
- The CEO of General Motors, Roger Smith (1925–2007), invested the insane amount of $45 billion in robotics to reduce labor cost. The press voted him to be CEO of the Year 1984. After his endeavour failed spectacularly, he was soon voted to be one of the Top 10 Worst CEOs.
- Foxconn in China wants to buy one million robots from 2013 onward. The official cause is cost savings, but robots also have the advantage that they do not jump to their death from the factory roof, as many Foxconn workers did.

As seen above, even if creators of automation have the best in mind, it may have rooted in negative situations. The question is, though, how does automation create conflict within the workplace? It is not that automation directly leads to conflict; it is the uncertainty, fear, and mistrust that result from the implementation of automation, which lead to conflict.How does fear lead to conflict? The employers that were interviewed have mentioned that one of the reasons for implementing automation is due to the fact that employees have high levels of grievance and dispute levels that accompany them. Without employees, there will be a limited need for any conflict resolution. Participants said that when automation is implemented, there will be various problems accompanying it (Table 1, Table 2, Table 4), thus leading to conflict rising in the workplace.

As mentioned above, fear has a negative implication for a company, especially in terms of relationships (Carter, 2012; Grev, 2015; Riggio, 2016). The reaction of a participant from this study, in terms of automation, was, *"if a person that works for you gets replaced by a machine then you no longer have that interaction with that person. I think it breaks the trust between you and your workers."*

As fear starts to erode the trust, respect and loyalty that exists within a relationship, it can begin to unnecessary friction between workers. One of the employers that were interviewed for the study stated that *"From the managers' point of view, automation is a good step to take, but for the people working on the floor it has an opposite effect because they are the ones that will lose their jobs. This reaction, in turn, will cause friction. "* This "friction" can lead to mistrust as well as a reduced sense of unity between employees.

People who usually regard the wellbeing of their coworker's relationships as crucial for job satisfaction, will turn from this point of view and focus only on me, myself and I. Fear can also lead to anger, and these two emotions are counterproductive within a business (Lebel, 2015).

Table-4. Theme 4 *impact on relationships*

	Associated keywords
Work relationships	If machines come in what becomes of your people. Because the people that I'm used to speaking to are going to leave. Communication is going down. I was very close with some of the guys, and if they end their contract, then I'm going to be sad. I'm only going to work to get through the day; I'm always going to think what those guys do without work. Because other people are going to lose their job, the relationship will not be the same. I'm going to have a guilty conscience if a machine replaces my friends. I know we are a big family, so yes it will have an influence, I know these people for a very long time, it won't be very nice. I think there will be an influence, we all are a big team, and if some were to lose their jobs, I would miss them. I will say it has an impact if a person that works for you gets replaced by a machine, then you no longer have that interaction with that person. But there will be relationships that are contaminated.
Relationships outside of work	Where are you going to support your family? What becomes of your family and children. Where are you going to support your family? The people will need to leave, and they cannot provide for their families. I have children at home that needs taking care of, how many children of today that are doing matric now or is at school, what becomes of them.
Lack of communication	But it is better to work with people than machines, you can't tell machines to do this or that but for people, you can yes. I think it will have an impact on relationships because we are very close and it wouldn't be nice if some of my friends lose their jobs, and you can't speak to a machine
Increased conflict	I think it breaks the trust between you and your workers. This reaction, in turn, will cause friction.

Employees will still see automation as detrimental to their everyday life even though companies can no longer operate without it. Unless employers find a way to ensure that they can keep both employees and implement automation at the same time, the negative perception will stay the same.

This is easier said than done, as mentioned before, there is no clear outcome were automation is concerned. The implementation thereof can either lead to high numbers of unemployment or new unique jobs being created. It is thus up to employees to ensure that they stay vital to the operation of the company. The only way to do this is by learning new relevant skills.

4. Conclusion

As mentioned above, there are various reasons why employees fear automation to such an extent. People are dependent on their work salaries each month in order to provide for the people who are reliant on them, without this daily, weekly or monthly income, people will become too poor to continue living a lifestyle where they can afford any basic human needs such as food, water and housing.

Supporting one's family, especially for men, is a bred in instinct, even in this new era where men and women have become much more equal in terms of work and responsibilities, it is still up to the men to ensure that their family is looked after. When they then have to start competing against machines that never take leave, is never of work for being sick, no problems in terms of grievances and disputes, no salaries have to be paid and is much faster. Their future, in which they have very little say in what happened, looks very bleak.

If automation is implemented and unemployment levels rise, there have to be some policies in place to help reduce the collateral damage in terms of employee dismissal. With Africa's cheap labour, more overseas investors will start moving their productions here. In the beginning, there will be a rise in unemployment as new factories will need to have people employed for low rates, this, however, will only be the case for a short while, just like the situation in China where their labourers are asking for salary increases, resulting in investors distancing themselves and looking towards Africa's labour, leaving China's factories with little choice but to start automating their production in order to replace their current workers.

If this is the case, Africa will mostly follow in China's footsteps leaving unemployment levels, once again, at it was before. This is the most known perception amongst employees. Even though some companies have felt the blow of retrenchments due to automation (Durden, 2017; Schawbel, 2015; Tankersley and Fung, 2016) there are still employees that remain, thus leaving them with other problem brought on by automation. These problems include things such as apprehension towards future jobs security, lack of support, friction between remaining relationships, and feeling as though employers no longer have everyone's best interests in mind.

Looking at the first theme that shows how participants perceive automation, it was easy to recognise the negative perception that participants had toward automation. In addition to the negative perceptions of the participants, they had a very negative attitude to the mere thought of bringing new machines and technology into the company. With the new era of technology that is upon us, employees no longer have the luxury to make have these types of attitudes if they want to survive.

The second theme looks at how differently employees and employers see automation or new technology. When a person starts to work for a company, there forms a bond between them and their employers. Employees look up to the employers for support and guidance, putting their hope for a better future in the employer's hand. Automation, if implemented, starts changing these relationships in a negative way, especially when retrenchment levels rise. Employees are depended on employers for a good decent job that will help them lead a good life. If employees start to feel that employers no longer have their best interests at heart, it will create friction and conflict, resulting in employers feeling more open to the idea of complete automatous workplaces. Employers, on the other hand, have to keep up with new trends to remain competitive, thus leaving little choice but to adapt to new technology and the implications it brings.

As mentioned above, if there are any rumours of automation being implemented, most people's minds immediately jump to the conclusion of job loss. With automation still being fairly uncharted territory for most companies, it is hard to say whether or not it will create more jobs than it destroys. Participants of the study only saw their own impending retrenchment when they discussed how they perceived automation. The question now remains is whether automation will create enough new jobs to ensure that everyone that was supposed to be replaced will remain employed.

As mentioned above, when working in a company, even for a short period of time, certain relationships are formed. These relationships usually carry vast value for these parties, especially in terms of support, values and motivation. Participants had strong positive feelings towards their co-workers and showed that they would be extremely unhappy if something would happen to alter these relationships, which they value so highly. When automation is brought in, and people lose these relationships due to the fact that employees will be replaced, it can lead to friction between the remaining relationships at work.

Even with all these problems that have arisen alongside automation in recent years employees also, with reluctance, started to realize that automation is needed for the future and that they have to start making the necessary plans to ensure that they stay valuable for employers.

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