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The potential use of ‘positive psychology interventions’ as a means of affecting individual senses of identity and coping capacity impacted by 4IR job and employment changes.

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Abstract:

The journey of positive psychology becoming an established discipline (approximately 20 years) has seen both theoretical and empirical attention given to identity level, cognitive, behavioural and perceptual ways in which the ‘best in us’ can be identified and developed via what have come to be called ‘positive psychology interventions’ (PPIs).

However, when we consider the anticipated impact of the 4IR on individuals we can predict the experiences of job losses, job change, and potentially the need for individuals to have multiple forms of work at any one time. If ‘work’ is viewed as one of the contributory structures to the nature of individual identity, then the consequences of the 4IR will impact the individual sense of identity, with a potential consequence to an individual sense of purpose, well-being and health. The article suggests that these experiences, psychologically, will be both an ‘identity crisis’ and an ‘existential crisis’.

This article proposes that there is an urgency of need and innovation to support individuals facing this change. Drawing on concepts of ‘Positive Psychology 2.0’ or ‘Existential Positive Psychology’ the article recommends two forms of PPIs as a potential support to affected individuals through an innovation in their nature and content which might offer a support to preserving and strengthening the sense of identity and of personal ‘fit’ while the backdrop of work and employment becomes volatile. Used in this way, the interventions would seek to influence the challenging existential experience of these job losses within the context and definition of existential positive psychology. The need for sensitive, cultural application and research on efficacy is discussed.

Key words: ‘Positive Psychology Interventions’; 4th Industrial Revolution; Existential Positive Psychology.

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1. Introduction

The intention of this article is to consider how two forms of positive psychology interventions (PPIs) might provide constructive resources to support individuals in adjusting to the social and occupational changes believed to be involved in the context of the 4IR.

Towards this end, this article will define the 4IR and an anticipated impact on jobs, specifically, in job losses, changes to job content, and potentially the need for individuals to hold multiple types of work at a single point in time. The article will propose two types of positive psychology interventions that may support individuals maintaining and adjusting their sense of identity in a volatile employment context. In the application of these PPI they will be responding to the dialectical nature and needs of the circumstance to support individuals in positive coping. Given that these proposals represent an innovation in the use and potential size of positive psychology interventions the circumstances of application and research that these changes will warrant are considered as the impact of the 4IR continues to unfold. The monitoring of efficacy and contribution are also relevant as this proposal would represent a significant step in the use of positive psychology to ease what are existential crises.

2. Defining the 4IR and the inferred impact of employment and work changes on personal identity.

The 4IR is a new era of industrial activity based on a wide variety of changes that are affecting the world economy at macro and micro levels. The World Economic Forum (2016) proposes at a 'macro' level that previously unconnected developments and advances in the areas of genetics, biotechnology, artificial intelligence, robotics and machine learning are now connecting and building upon each other in a huge diversity of ways which, in turn, is accelerating the volume of change in industries and their operational and working practices. These changes are altering work types, processes and employment patterns, and the financial and regulatory structures that encompass them in ways that can also become interconnected and reinforcing in their nature (World Economic Forum 2019).

The former Governor of the Bank of England, Mark Carney (2018) portrayed these changes as making industrial and commercial activity simpler, as a result more direct, and increasingly internet-based which has become a primary means of communication and transactions.

The World Economic Forum believes that the challenges and possibilities presented by these changes are so widespread they require proactive adaptation at all levels, such as governments, societies, corporations and individuals. An international survey by the World Economic Forum (2016) found that changing employment and work environments were already the biggest single factors being experienced and would be a driving force within the change experienced.

Interpretations of the impact and consequences of the 4IR changes are hugely polarised suggesting a wide range of possible consequences, gains and losses. Positively, it may create a “cultural renaissance” of inclusivity, sustainability and harmony across society (Schwab 2015). A more balanced interpretation suggests there will be transition that would involve changes to the volume of employment and its patterns that will last for many years. A negative extreme is also foreseen, one where unemployment levels could become catastrophically high thereby changing the level and capacity of financial functioning of governments (Prisecaru 2016, citing Borg 2016; Carney 2018).

Carney (2018) argued for a more balanced view of likely outcomes rather than these extremes. He acknowledged that 10 – 15% of the jobs in the UK and Ireland economy may be subject to at least partial automation. He also acknowledged there would be a mix of job losses, involving the nature of jobs changing, job creation, and the stimulation of new demand that would in turn create further and new forms of work. His words for even this mid-spectrum form of changes were stark: there would potentially be a destruction of jobs and livelihoods, and therefore by inference identities, before new ways of working emerged. This implies widespread and disruptive change that would have the qualities of a ‘destruction effect’ before new productivity and new jobs created further and more positive change. He foresees a lag or a gap between destructive and creative change. Taking this view, from the position of national and international responsibility he held at that time, Carney acknowledged that public and private institutions needed to take steps to shorten

the duration of the change being faced, and support the transitional impact on individuals, in such areas as institutionalising support for re-training mid-careers.

Given the social and historical context of work and employment is also a reflection of personal identity (elaborated on in the sections below), the 4IR consequences may present a widespread and even on-going need to adjust or be flexible in achieving and adjusting a sense of personal identity (Schachter 2004). Within what is called 'Positive Psychology 2.0' and 'Existential Positive Psychology' the nature of these job losses and their potential recurrence will comprise an existential crisis and an identity crisis for those having to adjust to their effects within the structure of their lives (Andrews 2016; Higuera 2018; Wong 2010, 2011, 2016, 2019).

The author proposes that 4IR effects on work and employment may include changed work content or process, loss of employment and the need to seek new work, and a shift to portfolio employment that may include varieties of work type and condition (Hirschi 2018).

Each of these deserve support in buffering or mitigating their effects and sustaining an individual's coping capability as proposed by Carney (2018).

3. The Formulation of 'Identity'

There is significant research illustrating the individual and social impact of job loss and unemployment over time and in different countries (e.g. Osipow, & Fitzgerald 1993; Gregg and Tominey 2004; McKee-Ryan, Song, and Wanberg 2005; Conroy 2010; Hahn, Specht, Gottschliing, and Spinath, 2015; Extremera and Rey 2016). The assertion of this article is given the centrality of employment within an individual identity, the pattern of work changes, job losses and work patterns related to the 4IR must also be anticipated as a crisis impact on the psychological sense of identity. Given the potential volatility indicated in the 4IR this may be a recurring impact on an individual's sense of identity.

A dictionary definition of 'identity' is "the distinguishing character of personality of an individual..." (Merriam Webster Dictionary). Yet from a psychological perspective, 'identity' is much more than this. The formation of identity is contained in the fifth stage of eight in Erik Erikson's life cycle of adult development (Erikson 1968). The experience of each

developmental stage comprises a struggle with a polarity, a potentially positive or negative outcome which is resolved 'on balance' rather than as an 'either or' outcome (Roazen 1976; Kivnick and Wells 2013). Erikson's theory proposes this formation of identity occurs between approximately 13 years and 18 years old, and is a psychosocial process within an individual and in relationship to their social context. Erikson argued that in the identity formation stage the positive outcome of the polarity struggle is 'fidelity', which represents a commitment or faithfulness to this sense of identity. The struggle contained in the polarity was seen by Erikson as a developmental turning point, an opportunity in a period of time where individual development could be shaped positively or negatively. Erikson believed that this struggle occurred within the context of a person's traits and character, and the social environment. The tension involved in each developmental polarity would remain within our lives, according to Erikson, and be revisited and potentially changed over time. Erikson's wife, Joan, writing independently of her husband on his theories expressed her belief that an incomplete resolution of a polarity could be redressed in later times and stages (Erikson 1988).

The formation of identity implies an individual encountering two key questions: 'who am I?' and 'how do I fit into the adult world?' (Erikson 1959). Answering these questions, Erikson asserted, involves an engagement with the past, present and future time, including a 'past' sense of self, and who a person may anticipate becoming in the future (McAdams 1988).

This psychological exploration occurs within the characteristics and context of an individual's society, and potentially the ideological, occupational, inter-personal and role expectations. The process implies an exploration of the context in which one exists as an individual and a commitment to a future sense of direction. When the 4IR implies that employment will be volatile and changeable, potentially in a recurring manner, the potential for a sense of loss, and a need for readjustment is a form of crisis within the individual identity and their own existential experience.

While Erikson implied that each of his developmental stages was discrete, they also built upon previous ones and where subsequent ones would build upon this one. Yet he also wrote that while ego identity is achieved, it also faces the need for revisions on-going within the social reality in which we find ourselves. The changes being forecast in the 4IR suggest

that the level and frequency of changes may be of a manner never anticipated by Erikson and require repeated readjustment on the part of individuals.

Erikson's assertion that 'identity' is found in the teenage years has been implicitly or explicitly questioned in subsequent literature. For example, Levinson (1978 and 1996) proposed that the individual's 'life structure' was something created in their 20s by three or four major decisions that could be inferred as an expression of an answer to Erikson's 'who am I?' questions. The life structure is an expression and unfolding of an individual's identity and the choices it contains are revisited over time, particularly at midlife. More recently, Arnett (2000) has illustrated the social and cultural changes occurring in recent times that are shaping changes to developmental experiences within Erikson's structure. Arnett's asserts that the formation of identity is not achieved in such a short period as Erikson proposed, and that identity is still being explored into the twenties during 'emerging adulthood' and is adjusted in the social and cultural context. Arnett, within his 2014 text and 2020 journal article (Arnett, Robinson and Lachman) articulates the factors and dynamics between them that are extending and drawing out in time the individual developmental experiences. These dynamics include structural changes to work, families and the lifespan.

From a different perspective, McAdams (1988, 1993, 2006, 2015) proposes that the individual sense-making of past, present and future occurs via a self-constructed 'story' that ties or unites different time periods of life. McAdams, in years of research-based work exploring the concept, offers categories or patterns of story that emerge and predictable interrelated features. McAdams (2015) acknowledges the complexity of this process of 'self-authorship' in the modern world and that it will take place and unfold over time. Narrative identity has become defined as the internal, evolving story of our self, constructed to provide or find a unity of purpose and meaning in life (McAdams and McLean 2013; McAdams 2015). It is proposed that we need this internal sense of narrative past, to the present, and an unfolding future we imagine and seek (McAdams 2015).

I propose that the volatility of 4IR employment patterns will potentially place a negative pressure or disruption on an individual sense of identity and the structure of their existence prior to employment or as a consequence of changes within it. For the purpose of this article, the focus is on the two identity formation questions cited above: who they may be as individuals, and where they fit within their changing context. Carney (2018) advocates

we support the consequences of this impact, and the author proposes positive psychology interventions as one route to do this.

4. Positive Psychology Interventions – Definition and Categories

The use of PPIs may buffer the disruptive experience of the 4IR employment changes to the individual, and may offer a means by which the individual can re-orientate or re-establish a sense of person, purpose and belonging. In proposing these interventions and their use the author recognises the broader criticism of the design and use of PPIs levelled by Wong and Roy (2017). However, given the context of their proposed use as a means of exploring and addressing existential and identity crises he believes that their use has been placed in what Wong (2011) defines as PP2.0 or existential positive psychology to address the mixed, often challenging and negative experiences of the polarities in life. To explain how this may be the case, and to introduce readers new to this area, PPIs are defined, and briefly reviewed, ahead of proposing two PPI types to achieve the aim described above.

The concept and actions of Positive Psychology Intervention has acquired a number of definitions during the years of the discipline establishing itself. For the purposes of this article and the nature of support for individuals it advocates, the context and definition chosen is more precise than others:

Parks and Biswas-Diener (2013) proposed a clear boundary over what can be considered a PPI –they need to be ***based on a positive psychology construct and involve a body of research-based evidence*** (Parks and Titova 2016). In offering a definition as specific as this they acknowledged that some exercises that may contribute to positive experience would be excluded by this.

Seligman, Rashid, and Parks (2006) had earlier argued that the PPI should promote positivity in everyday life, and in doing so ***support the individual in coping with either negative events or moods*** (Parks and Titova 2016). In doing this they moved the concept of the interventions into populations that may be clinical or experiencing some form of difficulty. *Schueller (2014) mirrored this priority in proposing ***the activities promote or capitalise on our strengths or compensate for our sources of unhappiness or weakness.****

Parks and Biswas Diener (2013) define the PPI more directly as ***activities promoting positive outcomes through positive processes***.

- The common characteristics and structure of a PPI used for this article argument are:
 - Structured use of a specific exercise or exercises for the purpose of promoting positive outcomes.
 - Chosen construct/s is represented and researched within PP.
 - Existence of cumulated research evidence.
 - Targeted on improving an individual state of overall well-being or altering a negative state.

The literature that has focused on the creation and research evidence for PPIs is considerable and the following is offered as an illustrative example: Peterson and Seligman 2004; Parks 2009; Parks and Schueller 2014; Jeste and Palmer 2015; Wood and Johnson 2016; Niemiec 2018; Rashid and Seligman 2019.

Parks and Biswas-Diener (2013) and Parks and Schueller (2014) undertook two milestone reviews to identify the type and content of PPIs existing at that time. Both reviews identified six core areas for PPIs (strengths, gratitude, forgiveness, meaning, savouring, and empathy). Parks and Biswas-Diener (2013) also identified social connections as an additional core area.

The exploration that follows will indicate that the subject areas in which PPIs are focused has broadened.

However, there are two further interpretations of this identified list that offer a deeper understanding of PPI contributions available. First, that interventions have been created and used as individual subject areas (e.g. Lyubomirsky 2008) and also in clusters of exercises (e.g. Rashid and Seligman 2019). Second, which is of potentially stronger importance, the majority of the core areas identified appear to be what are called 'positive traits' or 'positive psychology character strengths' (Peterson and Seligman 2004). These are individual differences that are stable, generalised and, in turn, shaped by culture and settings. If contrasted with the 24 cross-cultural strengths identified by Dahlsgaard,

Peterson, and Seligman (2005) and subsequently made part of the 'Values in Action' Classification of Character Strengths. Positive traits are core to and reflect our identity, our being and activity (Niemi 2018). Both choices, individual or clustered exercises seek to influence some aspect of individual experience and well-being. The experiential nature of PPIs is they re-orientate us to ourselves, and in their connection to positive aspects of life experience, they re-train attention and broaden focus to more positive aspects of life. The proposal is that either, in the context of this article, is a potential route of contribution to buffer the impact of 4IR employment changes.

The two largest sources of PPI evaluation are meta analyses conducted in 2009 and 2011. The focus of their analyses differed and as such their outcomes differ as well.

Sin and Lyubomirsky (2009) conducted a meta-analysis of 51 interventions with 4,266 individuals. They found that PPIs intended to cultivate positive feelings, behaviours and cognition enhanced well-being and relieved depressive symptoms. Several factors were found to impact the effectiveness of the PPIs, including self-selection, age, the format and duration of the work, and the status of depression experienced.

The meta-analysis conducted by Bolier et al (2013) involved 39 studies and 6,139 individuals. They found small effects for positive psychology interventions which held to follow-ups at three and six months, suggesting while the effect was small there were still significant the results for subjective well-being . At follow-up, effect sizes were small, yet still significant for subjective and psychological well-being indicating they were sustainable. Different factors were found to influence the effectiveness of PPIs, including their length of duration and working individually.

Recognising that both these meta-analyses were conducted from the perspective of the 'scientism' criticised by Wong and Roy (2017) the use proposed within this article would require its own research to establish efficacy and outcomes and is recommended for use in a manner tailored to individuals, context and culture.

How does a PPI work? A PPI involves the experiential application of a positive psychology construct, and via the experience and learning gained personal attention and

state changes. Figure 1 below is a precis of the process outlined by Layous and Lyubomirsky (2013). This suggests that the operation of the PPI has a systemic quality in that the characteristics of the potential activity are matched to the needs and motivation of the individual with specific anticipated outcomes within the positive psychology construct involved. There is a period of time in which the activity is conducted which may result in cognitive, emotional and behavioural changes. Typically, within positive psychology constructs this may result in a change to individual well-being.

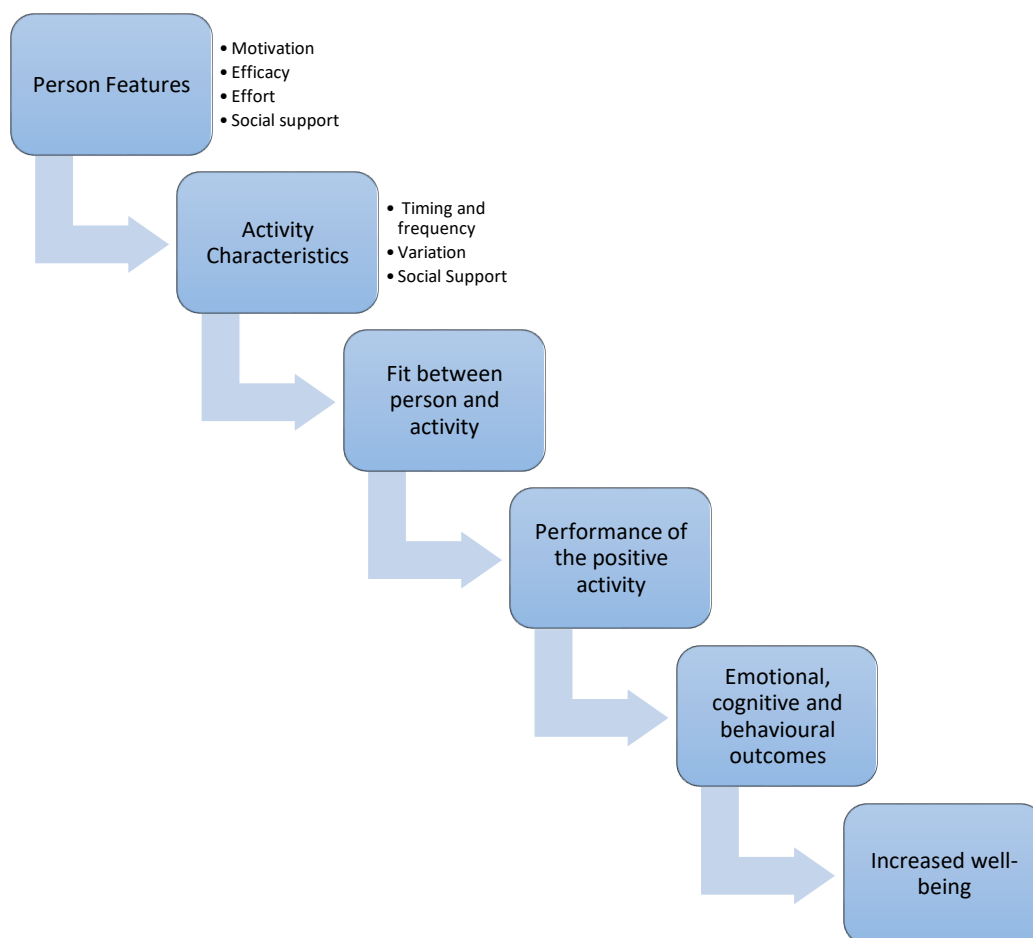


Figure 1: How Does A Positive Psychology Intervention Work?

It should be noted that one of the dynamics of exercises recognised by Lyubomirsky (2008) is what is termed 'the person-activity-fit'. This recognises that individuals are drawn

to certain practices and not others. A research-based random assigning of individuals to activities without a recognition of this would arguably result in some evidence of 'lack of fit'.

Schueller (2014) acknowledges that individuals gain fulfilment from many different aspects of their lives, such as personality, leisure and family lives. This being the case, it must be assumed that there will be a variation in what users of a PPI might seek, and in turn take and perceive as a gain or benefit. He proposes research evidence indicates individuals will use part or a sub-set of the content of a PPI as their personal source of gain. Therefore, the fit of the PPI to the individual is critical on both of the above counts. This issue becomes more critical when one considers the culture within which the PPI and its user may sit.

Pedrotti (2014) summarises facets of culture as including identity, race, ethnicity, gender, sexual orientation, religion, socio-economic status and disability. She proposes that individuals prioritise and define different aspects of the culture within which they exist, and that these, in turn, contribute to the individual's worldview in personal and different ways. This is a further dynamic that must be considered in the design, development and application of a PPI.

5. Two Types of PPI being proposed for the purposes of this article.

Two types of PPI are being proposed for use in this context. First, a cluster and sequence of exercises with a function and track-record of reorienting individuals to themselves and their characteristics, titled 'positive psychotherapy', but usable in a non-therapeutic context. Second, what are termed 'positive traits' and are subject to influence and development via a PPI with a function of increasing or buffering an individual's capacity to adjust or cope with adversity. The author proposes that used in this manner the processes and values would address the existential and identity crises as argued and implied by Andrews (2016), Waterman (1984), Higuera (2018), Wong (2010, 2011 and 2019). E.g. they would offer a means of exploring complex experiences of identity, and use processes of discovery and creation to look at choices for change. In this they will provide a response to the dialectical nature of the experience, supporting an individual in facing challenging change while grounding this in aspects of the best in themselves.

Positive Psychotherapy (PPT) is a structured approach involving a number and sequence of exercises, which are PPIs in their own right (ranging from 6 to 15 in various articles) aimed at influencing positive aspects of human experience. The psycho-emotional effect is theorised to improve well-being and support individuals' capacity to cope with difficulties they face. Reflecting the purpose, goals and intention of positive psychology as a discipline, and Existential Positive Psychology they seek to build upon the best in individuals (Parks 2009) and in the context of this article, support individuals in gaining insight and making constructive adjustments to the experiences they face. Rashid (2015) and Rashid and Seligman (2019) see PPT as involving three phases. First, exploring a balanced life narrative, and personal strengths from different perspectives. Second, developing positive emotions and ways to deal with negative memories. Third, fostering positive relationships, meaning and purpose. Perhaps putting this in other words, PPT supports participants in developing new perspectives and thinking patterns around who they are as individuals, their experience of positive emotions and ways of relating.

Rashid and Howes (2016) portray PPT as addressing an individual's desires and growth as well as their potentially troubled state, a balance that would be appropriate in the context of 4IR employment changes. They believe that the PPT as a process offer a support and problem-solving approach that represents a holistic and broader-based way of emerging from challenges addressed in this article. The author suggests that this is what is called for in support of 4IR adverse employment impacts, via counselling or employment support.

These PPT exercises were used originally in the general population, university student samples, and individuals with mild to moderate depression (Seligman, Steen, Park and Peterson 2005; Seligman, Rashid and Parks 2006). This work was a milestone step in taking this activity into clinical settings .

PPT has tended to be seen as a process subject to or capable of revision with new participant groups, and therefore it lends itself for use in the context of 4IR employment changes and contribution towards its effects. Rashid (2015) indicates that the statistical results achieved in the reviewed research within his article showed medium to large effect sizes.

Rashid asserts that PPT is primarily based on Seligman's (2002) conceptualisation of happiness and subsequently well-being (2011) called 'PERMA', operationalising it in exercises. However, 'PERMA' was not proposed and published until five years after PPT was written-up for the first time. However, Seligman (2011) later asserted that the focus on 'happiness' was too vague and general, and that he moved to focus on well-being instead. The concept of PERMA is that well-being occurs through five scientifically measurable components: Positive Emotion, Engagement, Relationships, Meaning, Accomplishment.

The author proposes that each of these five criteria might indicate a capacity to function and contribute in the context of job loss or change, and in which pre- and post- intervention change may be measured. The process of causation inferred above within the sequence of exercises is a renewed perspective of the whole person, and a reorientation and a revised experience of what this might mean.

Turning to the concept of 'Positive Traits', Martin, Harmell and Mausbach (2015) portray a work base for their writing of what they name as 'positive psychological traits'. These traits are: optimism, wisdom, personal mastery, perceived self-efficacy, coping, conscientiousness, spirituality and religiosity. They identify a growing body of research linking their presence to improved physical and health outcomes. Parks et al (2015) in an exploration of PPIs used for psychotherapeutic and behavioural interventions identify positive traits that reduce suicidality or ideation. For the purpose of the problem context of this article (work loss and change) the proposal is that these same traits might support individuals reasserting their capacity to move forward in the face of workplace changes , and the identity and existential pressures they imply. The traits identified were gratitude, grit and meaning in life, where individual positive psychology interventions related to these traits reduced suicidality, decreased hopelessness and increased optimism (Parks et al 2015).

What is the research-based 'reality' of this intervention?

PPT has been systematically developed and gradually tested in populations of relatively small numbers and on a breadth of problems of varying complexity and need. This is

indicative of its application and flexibility and the author proposes that it is relevant as a form of coaching or professional development for individuals facing the employment volatility of the 4IR. Naturally, this would require new and further research-evidence based testing.

Rashid appeared to take a positive perspective on the efficacy of the process in earlier research work, (e.g. Seligman and Rashid 2006). Yet in his 2015 paper, (and in Rashid and Howes 2016) with a focus on the psychotherapeutic application, he proposes more bluntly that determining efficacy and effectiveness of interventions of this nature can take decades, with a plethora of scientific and methodological research processes. He believes that a valuable and promising start has been made. Rashid further acknowledges that work to-date has been based on group rather than the individually-focused application being advocated in this paper and that longitudinal and multi-method research designs may reveal more than presently known. The efficacy measures needed for employment-based change and support are likely to be less. While they may be applied to groups, they can also be used in support of individuals. Both these forms of support were highlighted as needed by Carney (2018).

6. The potential contribution of PPIs to a sense of identity

Descriptions of the 4IR work-related changes infer a volatility, volume and frequency of change that will potentially be experienced by individuals in the global workforce. The working assumption and proposal of this article is if the 4IR places employment and work experiences under significant change and / or loss it will in turn create a pressure on an individual's sense of identity, 'who am I?', and their sense of 'where do I fit?'. An identity crisis is, in turn, an existential crisis.

This article proposes that the use of PPIs focused on not just promoting the positive, but also coming to terms with the challenges of life, represents a choice of potential support in what might be a counselling, coaching or employment-based setting to either a cluster of positive traits that may in turn offer a route to re-strengthening a sense of identity.

However, Parks and Schueller (2014) acknowledge that in moving forward in the development and use of PPIs it must be understood that the population being served is not homogeneous. While the structure of a PPI may remain the same the audience or population it serves will change. Needs will vary with context and culture. Positive affect and results in one setting may conceivably become harm in another to which it is not suited and therefore care must be used to ensure a PPI is appropriate to a population in focus. Working from this perspective of sensitivity would also address criticisms levelled by Wong and Roy (2017) in ensuring support is tailored to individual and challenging circumstances in life.

Results, the influence achieved by the intervention, will vary across their type and the relationship an individual in the population has with the subject area. This being the case, we can infer some of the content within a structured PPT intervention with a group of individuals will resonate and affect some people more strongly than others.

Pedrotti (2014) goes further in recognising and focusing on the influence of culture on the content and intention of a PPI. She emphasises the breadth of facets that may comprise a culture, such as race, gender and nation of origin, will influence and create an individual's world view. This, too, will influence the salience of a PPI to a participant, and may, for example, create focus that could be individualistic or collective in its nature. Further, she asserts that the constructs that may comprise PP and an intervention, may relate in different ways within cultural groups or their context, and that practitioners must anticipate and be alert to this.

Against this background, Parks et al (2015) propose that the preparation of an intervention of this nature should involve four steps: an evaluation of the rationale for the intervention; a consideration of the needs of the target audience; adjusting delivery to the reading levels of the audience; and selecting the best possible delivery format available, e.g. web-based or smart phone design or an alternative.

Rashid and Seligman (2019) argue that deliberately seeking increases in positive functioning is a means of alleviating a problem state, such as unemployment or work change. Further, a person-centred way of working (Joseph and Linley 2006; Joseph 2015) represents a 'meta theory' through which interventions of the nature explored in this article may be addressed. An implication of this choice is an individual's needs would not be

defined by a 'diagnosis', but through a formulation of approach and action that addresses an individual's needs.

In proposing and exploring these ideas with the intention of supporting those adversely affected by the 4IR, we need to recognise there is no single formula or algorithm to answer this need (Niemic 2018). The individuality and subjectivity of those affected will need to guide the support offered.

Niemic (2018) points towards a crucial need for support of this nature from his work on strengths based interventions: what he proposes as a general lack of self-awareness in individuals and a personal disconnection with who one is, our identity (Linley and Harrington 2006, cited in Niemic 2018). This article is based on the inference that this lack of personal awareness and disconnection may be amplified or complicated via work and employment disruption anticipated in the 4IR; that this situation may get worse. Carney (2018) pointed towards a profound need for support for individuals facing 4IR employment changes. The need is even more pressing if we accept Niemic's experience and proposal.

To conclude, while it is important to acknowledge that this article proposes a means by which individuals may be supported in the face of large scale employment, these ideas sit in parallel with other research and proposals for seeking a positive approach and response in challenging times e.g. Mayer and Oosthuizen (2020) and Mayer (2020). This is a reflection of what would be called Positive Psychology 2.0 and Existential Positive Psychology as a means of responding to otherwise negative experiences in our lives. The proposed use of these interventions represents a potential turning point in the practise of positive psychology, and the place and understanding of existential positive psychology. It is a natural and professional step to seek research-based evidence for the psychological support of change. However, the potential volume of use that could follow employment change support in the impact of the 4IR, and the variety of contexts and culture in which it could occur make this proposal an unusual possibility and illustration of constructive support for change, and would offer valuable insight into the dynamic and nature of existential impact of the 4IR.

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References

- Andrews, M. (2016). The existential crisis. *Behavioral Development Bulletin*, 21(1), 104-109.
- Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480.
- Arnett, J.J. (2014). *Emerging Adulthood: The Winding Road From the Late Teens Through the Twenties*. (Second Edition). Oxford, Oxford University Press,
- Arnett, J.J., Robnson, O., & Lachman, M.E. (2020). Rethinking Adult Development: Introduction to the Special Issue. *American Psychologist*, 2020, 75(4), 425-430.
- Bolier, L., Haverman, M., Westerhof, G.J., Riper, H., Smit, F., & Bohlmeijer. (2013). Positive Interventions: a meta-analysis of randomized controlled studies. *BMC Public Health*, (2013), 13, <http://www.biomedcentral.com/1471-2458/13/119>.
- Borg, A. (2016). How will the Fourth Industrial Revolution affect economic policy? Talk given at World Economic Forum, Davos, 28th January 2016.
- Carney, M. (2018). The Future of Work. Speech given by Mark Carney, Governor of the Bank of England, at the 2018 Whitaker Lecture, Central Bank of Ireland, 14th September 2018.
- Conroy, M. : *A Qualitative Study of the Psychological Impact of Unemployment on individuals*. Masters Dissertation, Dublin, DIT, September 2010.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, Basic Books.
- Dahlsgaard, K., Peterson, C., & Seligman, M.E.P. (2005) Shared Virtue: The Convergence of Valued Human Strengths Across Culture and History. *Review of General Psychology* 2005, 9, (3), 203 – 213.
- Erikson, E.H. (1959). *Identity and the Life Cycle*. New York, W.W. Norton & Co.
- Erikson, J.M. (1988). *Wisdom and the Senses: The Way of Creativity*. New York: Norton.
- Extremera N, Rey L (2016). Attenuating the Negative Impact of Unemployment: The Interactive Effects of Perceived Emotional Intelligence and Well-Being on Suicide Risk. *PLoS ONE* 11(9): e0163656. <https://doi.org/10.1371/journal.pone.0163656>
- Gregg, P. and Tomney, E. (2004). The Wage Scar from Youth Unemployment. *Department of Economics, The University of Bristol*.
- Hahn, E., Specht, J., Gottschliing, J., & Spinath, F.M. (2015). Coping with Unemployment Duration and Personality on Trajectories of Life Satisfaction. *European Journal of Personality*, 29, 635-646.

Higuera, V. (2018). What is an existential crisis, and how do I break through it?

Healthline. <https://www.healthline.com/health/existential-crisis>

Hirschi, A. (2018). The Fourth Industrial Revolution: Issues and Implications for Career Research and Practice. *The Career Development Quarterly*, September 2018, 66.

Ivtzan, I., Lomas, T. Hefferon, K. & Worth, P. (2016) *Second Wave Positive Psychology*. London, Routledge.

Jeste, D.V. & Palmer, B.W. (Eds.) (2015). *Positive Psychiatry: A Clinical Handbook*. Washington, American Psychiatric Publishing.

Joseph, S. & Linley, P.A. (2006). *Positive Therapy: A meta-theory for positive psychological practice*. London, Routledge.

Joseph, S. (2015). *Positive Therapy: Building bridges between positive psychology and person-centred psychotherapy*. London, Routledge.

Kivnick, H.Q. and Wells, C.K. (2013). Special Issue: Remembering Our Roots - Untapped Richness in Erik H. Erikson's Rootstock. *The Gerontologist*, 54, (1), 40-50.

Layous, K. and Lyubomirsky, S. (2013). How do simple positive activities increase well-being? *Current Directions in Psychological Science*, 22, 57-62.

Levinson, D.J., Darrow, C.N., Klein, E.B., Levinson, M.H., & McKee, B. (1978). *The Seasons of a Man's Life*. New York: Ballantine Books.

Levinson, D.J., & Levinson, J.D. (1996). *The Seasons of a Woman's Life*. New York: Alfred Knopf.

Linley, P.A. & Harrington, S. (2006). Strengths coaching: A potential-guided approach to coaching psychology. *International Coaching Psychology Review*. 5(1), 6-15. Cited in:

Niemiec, R.M. (2018). *Character Strengths Interventions: A Field Guide for Practitioners*. Boston, Hogrefe Publishing Corporation.

Lyubomirsky, S. (2008). *The How of Happiness: A Scientific Approach to Getting the Life You Want*. New York, Penguin Press.

Lyubomirsky, S, and Layous, K. (2013) How do simple positive activities increase well-being? *Current Directions in Psychological Science*, 22, 57-62.

Martin, A.S., Harmell, A.L., & Mautsach, B.T. (2015). Positive Psychology Traits. Chapter in: Jeste, D.V. and Palmer, B.W. (Eds.) (2015). *Positive Psychiatry: A Clinical Handbook*. Washington, American Psychiatric Publishing

Mayer, C-H. (2020). Transforming Shame in the Workplace, Leadership and Organisations: Contributions of Positive Psychology Movements to the Discourse. Chapter in: Dhiman, S. and Marques, J. (Eds.) (2020). *New Horizons in Positive Leadership and Change: A Practical Guide for Workplace Transformation*. Switzerland, Springer Nature.

Mayer, C-H., & Oosthuizen, R.M. (2020). Positive transformation towards the Fourth Industrial Revolution: empirical evidence from a technology company. June 2020. *International Review of Psychiatry*, 7(7).

McAdams, D.P. (1988). *Power, Intimacy and the Life Story: Personological Inquiries into Identity*. London, Guildford Press.

McAdams, D.P. (1993). *The Stories We Live By: Personal Myths and the Making of the Self*. London, Guildford Press.

McAdams, D.P. (2006). *The Redemptive Self: Stories Americans Live By*. Oxford, Oxford University Press.

McAdams, D.P. (2015). *The Art and Science of Personality Development*. London, Guildford Press.

McAdams, D.P. & McLean, K.C. (2013). Narrative Identity. *Current Directions in Psychological Science*. 22, 233-238.

McKee-Ryan, F.M., Song, Z., & Wanberg, C.R. (2005). Psychological and Physical Well-Being During Unemployment: A Meta Analytic Study. *Journal of Applied Psychology*, 90, (1), 53-76.

Niemiec, R.M. (2018). *Character Strengths Interventions: A Field Guide for Practitioners*. Boston, Hogrefe Publishing Corporation.

Osipow, S.H. & Fitzgerald, L.F. (1993). Unemployment and Mental Health – A neglected Relationship. *Applied and Preventative Psychology*, 2, 56-63, Cambridge University Press.

Parks, A.C. (2009) Positive Psychotherapy: Building a model of empirically supported self-help. PhD Thesis presented to the University of Pennsylvania.

Parks, A.C. & Biswas-Diener, R. (2013). Positive Interventions: Past, Present and Future. Chapter in: Kashdan, T. et al. (Eds.) (2013). *Mindfulness, Acceptance and Positive Psychology*. Oakland, Context Press.

Parks, A.C. & Schueller, S.M. (Eds.). (2014). *The Wiley Handbook of Positive Psychology Interventions*. John Wiley & Sons Ltd, Chichester.

Parks, A.C., Kleiman, E.M., Kashdan, T.B., Hausmann, L.R.M., Myer, P.S., Day, A.M., Spillane, N.S. & Kahler, C.W. (2015). Positive Psychotherapeutic and Behavioural Interventions. Chapter in: Jeste, D.V. and Palmer, B.W. (Eds.) (2015). *Positive Psychiatry: A Clinical Handbook*. Washington, American Psychiatric Publishing.

Parks, A.C. & Titova, L. (2016). Positive Psychology Interventions: An Overview. Chapter in: Wood, A.M. and Johnson, J. (Eds.) (2016). *The Wiley Handbook of Positive Clinical Psychology*. John Wiley & Sons, Chichester.

Pedrotti, J.T. (2014). Taking Culture into Account with Positive Psychological Interventions. Chapter in: Parks, A.C. and Schueller, S.M. (Eds.). (2014). *The Wiley Handbook of Positive Psychology Interventions*. John Wiley & Sons Ltd, Chichester.

Peterson, C. & Seligman, M.E.P. (2004). *Character Strengths and Virtues*. Oxford, Oxford University Press.

Prisecaru, P. (2016). *Challenges of the Fourth Industrial Revolution*. Knowledge Horizons: Economics. 8, (1), 57-62.

Rashid, T. (2015) Positive psychotherapy: A strength-based approach. *The Journal of Positive Psychology*: 10:1, 25-40.

Rashid, T. & Howes, R.N. (2016). Positive Psychotherapy: Clinical Applications of Positive Psychology. Chapter in: Wood, A.M. & Johnson, J. (Eds.) (2016). *The Wiley Handbook of Positive Clinical Psychology*. John Wiley & Sons, Chichester.

Rashid, T. and Seligman, M.E.P. (2019). *Positive Psychotherapy: Clinicians Manual*. Oxford, Oxford University Press.

Roazen, P. (1976). *Erik H. Erikson: The Power and Limits of a Vision*. New York; Free Press.

Roberts, L.M., Dutton, J.E., Spreitzer, G.M., Heaphy, E.D., & Quinn, R.E. (2005). Composing the Reflected Best-Self Portrait: Building Pathways For Becoming Extraordinary in Work Organizations. *Academy of Management Review* 2005, Vol. 30, No. 4, 712–736.

Schachter, E.P. (2004). Identity Configurations: A New Perspective on Identity Formation in Contemporary Society. *Journal of Personality*, 72(1), 167-199.

Schueller, S.M. (2014). Person-Activity Fit in Positive Psychology Interventions. Chapter in: Parks, A.C. & Schueller, S.M. (Eds). (2014). *The Wiley Handbook of Positive Psychology Interventions*. John Wiley & Sons Ltd, Chichester.

Schwab, K. (2016). The fourth industrial revolution: what it means, how to respond. Talk given at: World Economic Forum, Davos, 14th January 2016.

Seligman, M.E.P. (2011). *Flourish: A New Understanding of Happiness and Well-Being and How to Achieve Them*. London, Nicholas Brealey.

Seligman, M.E.P., Rashid, T. & Parks, A.C. (2006) Positive Psychotherapy. *American Psychologist*. 61(8), 774-788.

Seligman, M.E.P., Steen, T.A., Park, N. and Peterson, C. (2005) Positive Psychology Progress: Empirical Validation of Interventions. *American Psychologist*, 60, (5), 410 – 421

Sin, N.L. and Lyubomirsky, S. (2009) Enhancing Well-Being and Alleviating Depressive Symptoms with Positive Psychology Interventions. *Journal of Clinical Psychology in Session*, 65 (5), 467 – 497.

Waterman, A. S. (1984). Identity formation: Discovery or creation? *The Journal of Early Adolescence*, 4(4)

Wong, P. T. P. (2010). What is existential positive psychology? *International Journal of Existential Psychology and Psychotherapy*, 3(1), 1-10.

Wong, P.T.P. (2011) Positive Psychology 2.0: Towards a Balanced Interactive Model of the Good Life. *Canadian Psychology*, Vol. 52, No. 2, 69 – 81.

Wong, P.T.P. (2012). Toward a Dual System Model of What Makes Life Worth Living. Chapter in: Wong, P.T.P. (Ed.) (2012). *The Human Quest for Meaning: Theories, Research and Applications* (Second Edition). London, Routledge.

Wong, P. T. P., & Roy, S. (2017). Critique of positive psychology and positive interventions. In N. J. L. Brown, T. Lomas, & F. J. Eiroa-Orosa (Eds.), *The Routledge international handbook of critical positive psychology*. London, UK: Routledge.

Wong, P. T. P. (2019). Second wave positive psychology's (PP 2.0) contribution to counselling psychology. *Counselling Psychology Quarterly* [Special Issue].

Wong, P.T.P (2019a) Why and How I developed the Positive Psychology of Suffering. Retrieved from: <http://www.drpaulwong.com/why-and-how-i-developed-the-positive-psychology-of-suffering/>

Wood, A.M. & Johnson, J. (Eds.) (2016). *The Wiley Handbook of Positive Clinical Psychology*. John Wiley & Sons, Chichester.

World Economic Forum. (2016). The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution. A 'Global Challenge Insight Report' published by the World Economic Forum in January 2016.

World Economic Forum. (2019). Centre for the Fourth Industrial Revolution Network for Global Technology Governance. Report produced in May 2019.