

# When do time perspectives promote wisdom? Exploring the moderating effects of internal dialogues

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## Abstract

Wisdom is considered to be a prototype of positive functioning and flourishing. In the light of previous studies, wisdom correlates positively only with past-positive and future time perspectives. The main aim of this paper is testing whether adaptive types of internal dialogues weaken the negative relationships between the remaining time perspectives and wisdom or change their relationship to a positive one. To check this, 129 women and 105 men completed three methods: the Zimbardo Time Perspective Inventory, the Internal Dialogical Activity Scale—Revised, and the Three-Dimensional Wisdom Scale. It was confirmed that different types of internal dialogues can reduce negative and foster positive relationships between time perspectives and wisdom. The results can be used in psychological practice to support clients' development in terms of wisdom. These findings can also encourage independent work on oneself, especially for those who conduct internal dialogues in everyday life but until now have not consciously used these dialogues as a tool for self-development.

## Keywords

Time perspective, wisdom, flourishing, internal dialogue, internal dialogical activity

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## Introduction

As [Ardelt and Oh \(2015: 2\)](#) claim: “Wisdom is often considered the pinnacle of human development. Wise individuals are believed to have overcome many human weaknesses and have developed their full potential”. According to [Wink and Staudinger \(2016\)](#) wisdom is the prototype of positive functioning, whereas [Webster et al. \(2014\)](#) are of the opinion that wisdom is the optimal level of functioning and can serve as a prototypical type of flourishing. As some studies show wisdom is strongly related to eudemonic virtues (e.g. cooperative intentions, personal growth, generativity; [Kunzmann and Baltes, 2003](#); [Wink and Staudinger, 2016](#)), subjective well-being measured as life satisfaction, happiness, and the absence of depressive symptoms ([Ardelt, 2003](#)), and psychological well-being understood as an orientation toward personal growth, purpose in life, self-acceptance, autonomy, mastery, and positive relations with others ([Ardelt and Oh, 2015](#)). Additionally it was found that wise reasoning was associated with greater life satisfaction, less negative affect, better social relationships, less depressive rumination, more positive versus negative words used in speech, and greater longevity ([Grossmann et al., 2013](#)). Generally, growing in wisdom is considered beneficial to the individual, others, and the larger community ([Ardelt and Oh, 2015](#)). Therefore the last 30 years have resulted in an increased interest in issues of wisdom among psychologists.

Among the numerous proposals to take up this construct, Ardelt’s theory deserves special attention, because her approach to wisdom is consistent with both “lay” wisdom theories (implicit wisdom theories) and those that are the result of empirical verification (explicit wisdom theories) ([Ardelt, 2011: 279–282](#); cf. [Cheraghi et al., 2015](#)). Ardelt conceptualizes wisdom as a specific configuration of certain personality traits and personal competences. At the same time the construct of wisdom encompasses the cognitive (CW), reflective (RW), and affective dimensions (AW). CW reflects the ability to understand life as a whole. Its essence is the ability to perceive the deeper meaning and sense of phenomena and events concerning both intrapersonal and interpersonal issues. It is based on the knowledge of the positive and negative aspects of human nature, the awareness of the limitations of knowledge, the unpredictability of life, and its accompanying uncertainty. The development of CW is not possible without RW, which assumes the ability to evaluate events from different perspectives. The willingness to change one’s point of view allows one to reduce one’s subjectivity and gain distance from and/or insight into oneself. As a result, a person perceives life as it really is and not from the perspective of fears, projections, impulses, desires, or illusions. RW therefore reflects having a clear vision of oneself and the surrounding reality. AW concerns the ability of a person to show compassion and

empathy, and it is associated with the desire to strengthen well-being and overcome egocentric tendencies. It also indicates the presence of positive emotions and kindness toward other people. The development of this dimension implies a reduced concentration on oneself and, consequently, a deeper understanding of others. In this sense, AW, like CW, depends on RW (Ardelt, 2003).

In common understanding, wisdom is a derivative of the passage of time, which allows a person to accumulate life experiences and, thanks to them, achieve a mature insight into the nature of intrapersonal and interpersonal phenomena. In addition, many psychological theories of wisdom suggest a link between wisdom and maturity as measured by age (e.g. Erikson and Erikson, 1997; Labouvie-Vief, 1990; Reznitskaya and Sternberg, 2004). However, researchers have not unanimously agreed that an older person is always wiser than a younger one (Ardelt and Oh, 2015; Glück et al., 2013). Some studies have shown a lack of correlation between wisdom and age (Glück et al., 2013; Webster, 2007, 2010) and others even a negative correlation (Ardelt, 2003, 2011). It is conceivable that this depends in part on how wisdom is defined and the tool that measures it. It seems, however, that, for gaining wisdom, the attitude toward time—the dominant time perspective (TP)—may be more important than the passage of time itself.

Zimbardo and Boyd (1999) viewed the TP as an often unconscious process in which a person's temporal orientation strongly influences his/her psychosocial choices and behaviors and their consequences. Taking into account the way in which people relate to time, the authors distinguished five TPs: the past-negative TP (emphasis on traumas, disappointments, and sad moments from the past); the past-positive TP (positive evaluation of the past); the present-hedonistic TP (stress on pleasure without considering the consequences); the present-fatalistic TP (the belief that attempts to influence the future are pointless), and the future TP (formulating plans and setting goals).

According to Carelli et al. (2011), TP serves as a temporal lens through which life experiences are filtered (encoding, storing, recalling experienced events, and forming expectations and goals). Several studies have confirmed that the types of TP are significantly linked to different important aspects of human functioning (Bryant et al., 2005; Stolarski et al., 2014; Zhang and Howell, 2011; Zimbardo and Boyd, 1999). Boniwell and Zimbardo (2004: 167) described the TP as "... one of the most powerful influences on virtually all aspects of human behavior". Hence, what is the relationship between different TPs and wisdom?

Webster et al. (2014: 1052) claimed: "Wise persons learn from their past, and reminisce in order to regulate emotions, and resolve (or work on) challenging or traumatic events from earlier in life. Wise persons also recognize the positive motivational consequences of setting long-term goals and nurture an optimistic and expansive future orientation." The above statement was empirically confirmed: the authors revealed in their research the link of the past-positive and future TPs with wisdom in terms of Webster. This is the only study known to us

that has directly explored the relationship between wisdom and TPs. [Le and Doukas \(2013\)](#) examined older adults' current judgment of turning point events as being positive, negative, or neutral over time. The study suggested that individuals who are able to overcome adversity and to retell their life stories in a positive way have higher life satisfaction and wisdom. This result supports [Webster et al.'s \(2014\)](#) findings concerning the relationship between the past-positive TP and wisdom. [Pennebaker and Stone \(2003\)](#), in two projects, explored the "words of wisdom." In the first project, written or spoken text samples from over 3000 participants were analyzed. In the second project, the researchers analyzed the collected works of 10 well-known novelists, playwrights, and poets who had lived during the last 500 years. The authors found that, with increasing age (and presumably wisdom), individuals use more future-tense and fewer past-tense verbs, more positive and fewer negative affect words, and fewer self-references and demonstrate a general pattern of increasing cognitive complexity. These results are quite consistent with the studies mentioned above ([Le and Doukas, 2013](#); [Webster et al., 2014](#)) as well as with [Ardelt's \(2003, 2011\)](#) theory of wisdom.

The analysis of TP correlates has led to similar conclusions. The past-positive TP is positively associated with the sense of safety and social support, amicability, and energy and negatively with neuroticism ([Bryant et al., 2005](#); [Zhang and Howell, 2011](#); [Zimbardo and Boyd, 1999](#)), while the future TP is connected with optimism and health-promoting behavior ([Boyd and Zimbardo, 2005](#); [Zimbardo and Boyd, 1999](#)). These correlates are conducive to the development of the individual, so they are associated with wise functioning. In line with this thinking, one can suppose that the past-negative TP, which is connected with neuroticism, anxiety, depression, negative mood, low self-esteem, problems in social relationships, gambling, and a propensity for addiction ([Klingemann, 2001](#); [Stolarski et al., 2014](#); [Zhang and Howell, 2011](#); [Zimbardo and Boyd, 1999](#)), should be negatively linked with wisdom. Similarly, the present-fatalistic TP, which correlates positively with neuroticism and risky behaviors and negatively with emotional stability ([Daugherty and Brase, 2010](#); [Zhang and Howell, 2011](#); [Zimbardo and Boyd, 1999](#)), may be negatively related to wisdom.

In fact, there is a lack of broader research on the relationship between TPs and wisdom, so this article is intended to fill this gap. In the context of the studies and theory presented above, the first two hypotheses are as follows:

H1. The past-negative and present-fatalistic TPs correlate negatively with the three dimensions of wisdom—RW, AW, and CW.

H2. The past-positive and future TPs correlate positively with the three dimensions of wisdom.

Assuming that wisdom correlates positively only with the future and past-positive TPs, the question arises: in the case of remaining TPs (negatively or not at all related to wisdom), can any activity be undertaken that would weaken their negative relationship with wisdom or change the relationship to a positive one? Studies (Bruya and Ardelt, 2018; Sharma and Dewangan, 2017) have shown that wisdom can be taught in a traditional higher education setting. It seems that, in a less formalized reality, internal dialogues can also foster wisdom (Borawski, 2017; Hermans and Oleś, 2013).

What are internal dialogues (IDs)? These are discussions with oneself, which consist of confronting and agreeing on the various points of view that are currently available. IDs are more conscious and effortful than an activity that is commonly referred to as self-talk in the literature (Oleś et al., 2020). They take place in the manner of social relationships/negotiations. According to Puchalska-Wasył (2016, 2019, 2020) ID means that a person alternately adopts (at least) two different viewpoints and that utterances formulated (internally/silently or externally/aloud) from these viewpoints respond to one another. Oleś (2009; cf. Puchalska-Wasył et al., 2008) claims that IDs take three basic forms: (1) the continuation or simulation of social dialogical relationships in one's own mind, that is, imagined dialogues with people whom we know personally (e.g., with a friend, with a boss, etc.); (2) engagement in dialogues with figures who are no longer or have never been a direct part of our social environment (e.g., with the dead; with a guardian angel); and (3) confrontation of the viewpoints relevant to personal and/or social identity (e.g., "I-as a sage" vs. "I-as a fool"). For example, when we make an important decision on our work, we can consider the situation from different personal perspectives (e.g. I-as a wise person, I-as an opportunist, I-as a worker, I-as a mother, or I- as a wife) or taking into account the viewpoint of other people or groups (e.g. my professional group, my boss, my co-workers, my daughter, or my husband). This allows us to anticipate and analyze the consequences of a given decision for each aspect of our self and for people around us.

Why can IDs act as a potential moderator of the relationship between TPs and wisdom? Although different theories focus on different facets of wisdom and propose different methods to assess these facets, most of them consider perspective taking or the capacity to understand, coordinate, and integrate diverging perspectives to be at the core of wisdom (Borawski, 2017; Grossmann, 2017; Rakoczy et al., 2018; cf. Ardelt, 2003). Sternberg and Glück (2019: 551) held the opinion that "(...) wisdom involves the ability to see other people's points of view and to use this dialogical perspective in one's own thinking to seek a common good by balancing one's own, others', and higher-order interests over the long and short terms." Similarly, perspective changing and ability to evaluate situations from different viewpoints are typical of the IDs phenomenon. In some IDs it is also possible to integrate different standpoints (Puchalska-Wasył, 2017, 2019, 2020). Thus, IDs seem to be an effective tool for acquiring wisdom, especially

when they lead to the integration of opposing viewpoints or to broadening the insight with knowledge gained through the change of a cognitive perspective (Borawski, 2017). Insight is one of seven key-functions of ID identified in studies by Puchalska-Wasył (2016, 2020). It is worth emphasizing, however, that different types of IDs have different functions.

In this article, we examine internal dialogues as operationalized by Oleś (2009; Oleś et al., 2020). In his proposition, ruminative, maladaptive, and confronting IDs, among others, are distinguished, which fulfill rather non-adaptive functions. Ruminative IDs involve blaming oneself; they concern unpleasant topics that invoke feelings of frustration, weariness, and internal breakdown. Maladaptive IDs are undesirable, unpleasant, and even irritating for the person because their content and occurrence may interfere with the performance of tasks and/or result in their avoidance. Confronting IDs reflect the conflict between two clearly separated parts of the self and can lead to polarization or even fragmentation of the self. These three types of IDs do not seem to be conducive to wisdom. In this context, the third hypothesis can be posed:

H3. Maladaptive, ruminative, and confronting IDs correlate negatively with the three dimensions of wisdom (RW, AW, and CW).

Apart from these non-adaptive types, in the classification (Oleś et al., 2020) there are spontaneous IDs. They refer to the dialogical form of self-awareness and their relationship to adaptive psychological functioning is not clear. Additionally, Oleś (2009; Oleś et al., 2020) distinguished types of IDs that generally fulfill adaptive functions, for example, identity, supportive, social, and perspective-changing IDs. Identity IDs aim at answering identity questions and at attaining better self-knowledge. Supportive IDs help to overcome loneliness and strengthen self-esteem as they provide a sense of closeness and being understood by an inner interlocutor. Social IDs, defined as continuing or imagining dialogical social relationships (quarrels, discussions, or exchange of ideas) can be especially adaptive since they prepare people for future social situations (cf. Baumeister and Masicampo, 2010). Perspective-changing IDs concern a change of viewpoints to find solutions or gain a multifaceted understanding of difficult situations (Oleś, 2009; Oleś et al., 2020).

Since IDs can help in acquiring wisdom (Borawski, 2017; Hermans and Oleś, 2013), they presumably also moderate the relationship between TPs and wisdom. In line with the second hypothesis only past-positive and future TPs correlate positively with the three dimensions of wisdom. In that context, the main aim of this article is testing whether an adaptive internal dialogical activity weakens the negative relationships between the remaining TPs and wisdom or changes their relationship to a positive one. For example, the past-negative TP is connected with neuroticism, anxiety, depression, negative mood, and problems in social

relationships (Stolarski et al., 2014; Zhang and Howell, 2011; Zimbardo and Boyd, 1999). Taking this into account one can suppose that a person focused on this TP can be bitter, distrustful, and insensitive to the needs of others, which is characteristic for low-level AW (cf. Ardel, 2003). Social IDs consist in reflecting and continuing past conversations with others and creating scenarios for future ones. Together with supportive IDs, which are usually conducted with loved people who give support and sense of closeness (Oleś, 2009; Oleś et al., 2020), these types of IDs can show other people in a better light, as sensitive and caring about us. Thus, they can significantly reduce our distrust in and indifference toward others. Therefore, the fourth hypothesis is as follows:

H4. Supportive and social IDs moderate the negative relationship between the past-negative TP and AW. With a high frequency of these IDs, the relationship loses its significance.

On the other hand, a fatalistic attitude toward time is associated with the belief that we cannot influence our lives, our future (Zimbardo and Boyd, 1999). Changing the perspective/point of view allows people to distance themselves from their position and to look at problem from different sides. According to Oleś et al. (2020), perspective-changing IDs refer to a change in viewpoints in the service of understanding difficult/challenging situations or seeking solutions. Therefore, this type of IDs can help to reject a one-sided negative vision of reality and to eliminate the illusions and projections typical of low-level RW (Ardel, 2003). Hence, the the fifth hypothesis is as follows:

H5. Perspective-changing IDs moderate the negative relationship between the present-fatalistic TP and RW. With a high frequency of these IDs, the relationship loses its relevance.

The present-hedonistic TP manifests itself as a self-centered focus on one's own profits and pleasures without considering the consequences (Zimbardo and Boyd, 1999). Such TP seems not to be conducive to the development of AW, which is characterized by an enhanced understanding of others' behavior and motivations, a reduction in self-centeredness, and greater sympathetic and compassionate love for others (Cheraghi et al., 2015). On the other hand, it is well known that if we observe that we are liked, we ourselves begin to feel sympathy and kindness (Aronson and Worchel, 1966). In that context adaptive social IDs and supportive IDs, that is, dialogues with other people who care about us, who give us support and advice, who share their wisdom, can foster the growth of AW understood as the experience of bonding with others and compassion toward them, exceeding one's own egocentric tendencies. Thus, the sixth hypothesis is advanced:

H6. Supportive and social IDs moderate the relationship between the present-hedonistic TP and AW. The relationship is irrelevant with a low frequency of these IDs, while a high frequency of them favors the acquisition of AW.

As mentioned above, for people focused on the present-hedonistic TP, pleasure is the most important thing in life. The fact that they ignore consequences (Zimbardo and Boyd, 1999) suggests that they may not consider other perspectives besides the pleasurable perspective. The ability to take different perspectives is the core of RW (Ardelt, 2003). At the same time, reflective and bias-free thinking RW requires self-reflection and self-examination (Cheraghi et al., 2015). According to Oleś et al. (2020), identity IDs refer to questions and answers about identity, life priorities, and values. These IDs “pertain to searching for authenticity and may precede important life choices” (Oleś et al., 2020: 4). Since identity dialogues help to clarify values and realize what is important to better understand one’s own needs, they can promote a deeper than just pleasurable perception of oneself and the world. In this way, they allow one to see what reality is like without distortions and projections, which is the essence of RW (Ardelt, 2003). Hence, the seventh hypothesis is as follows:

H7. Identity IDs moderate the relationship between the present-hedonistic TP and RW. The relationship is irrelevant with a low frequency of these IDs, while a high frequency of them favors the acquisition of RW.

## Method

### *Respondents and procedure*

The study included 234 adults, 129 women, and 105 men, aged between 20 and 65 years. The mean age was 40.69 years ( $SD = 13.21$ ). Only four participants (1.7%) had primary education and 22 people (9.4%) had vocational education, 68 people (29.1%) had secondary education, and 140 people (59.8%) had higher education. Among the respondents, 73.5% worked professionally, 7.3% worked and studied simultaneously, 5.6% studied, 9.0% were retired, and 4.7% were unemployed. Most participants had a spouse (77.4%), 16.7% were single, 5.1% were divorced, and 0.9% were widowed. Among the respondents, 46.2% came from rural areas, 11.5% came from large cities with more than 100,000 inhabitants, and 42.3% came from smaller cities. The data were collected through a web survey. The informed consent of the participants was a prerequisite for the study. The procedure was approved by the Research Ethics Committee at the university where the study was conducted. Three measures were used in the order described below.



## Measurements

Zimbardo Time Perspective Inventory (ZTPI). The method by [Zimbardo and Boyd \(1999\)](#) measures attitudes toward time and the behaviors related to them. The ZTPI consists of 56 items, to which responses are given using a 5-point Likert scale ranging from 1 (*very untrue of me*) to 5 (*very true of me*). The items are assigned to five scales concerning five TPs, which are interpreted as presented in Introduction. The scales are as follows: (1) the past-positive scale (9 items); (2) the past-negative scale (10 items); (3) the present-hedonistic scale (15 items); (4) the present-fatalistic scale (9 items); and (5) the future scale (13 items). In the present study, the Polish version of the measure was used ([Sobol-Kwapińska et al., 2016](#)). The Cronbach's alpha indices calculated for the scales of the ZTPI in this study are presented in [Table 1](#). It should be added that the past-positive scale initially obtained an unacceptable alpha ratio of 0.50. After deleting two items from this scale (25 and 41), the alpha index increased to 0.71. Therefore, all the other analyses were performed on seven items of the past-positive scale.

The Internal Dialogical Activity Scale—Revised (IDAS-R). Designed by [Oleś \(2009; Oleś et al., 2020\)](#), this is a method aimed at measuring eight different kinds of IDs. It consists of 40 items, with five items in each subscale. The respondent assesses items using a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). The subscales are as follows: (1) Identity IDs; (2) Maladaptive IDs; (3) Social IDs; (4) Supportive IDs; (5) Spontaneous IDs; (6) Ruminative IDs; (7) Confronting IDs; and (8) Change of perspective. The types of IDs are understood as presented in Introduction. The higher the score on each subscale, the greater the frequency of that kind of ID. One can also calculate the intensity of general internal dialogical activity by summing the ratings of all 40 items. The Cronbach's alpha indices obtained for the IDAS-R in this study are presented in [Table 1](#).

Three-Dimensional Wisdom Scale (3D-WS). This scale for measuring wisdom, by [Ardelt \(2003\)](#), contains 39 items rated on a 5-point Likert scale ranging from 1 (*no*) to 5 (*yes*). The items are assigned to three subscales: (1) Reflective wisdom (RW; 13 items); (2) Affective wisdom (AW; 12 items); and (3) Cognitive wisdom (CW; 14 items). These wisdom dimensions are defined as outlined in Introduction. In the present study, the Polish version of the tool was used ([Steuden et al., 2016](#)). The internal consistency of the three subscales of the 3D-WS obtained in this study is presented in [Table 1](#).

## Statistical analysis

All the moderation analyses were performed using PROCESS, model 1 ([Hayes, 2018](#)). The significance of indirect effects was tested using the bootstrapping procedure. Unstandardized indirect effects were computed for each of the 5000

**Table 1.** Correlations among measured variables and internal consistency.

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Alpha
1. Past-Positive	.00	.45***	.12	.55***	.20***	.23***	-.12	.13*	-.10	.12	.13*	.02	-.12	-.09	-.01	.02	.71
2. Past-Negative	—	.20***	.48***	.10	-.47***	-.14*	-.36***	.14*	.26***	.17**	.27***	.17*	.43***	.30***	.25***	.31***	.76
3. Hedonistic	—	—	.42***	.34***	.03	.11	-.10	.16*	-.01	.13	.15*	.11	-.02	.04	.14*	.11	.72
4. Fatalistic	—	—	—	.11	-.30***	-.17*	-.52**	.01	.29***	.01	.12	-.04	.10	.16*	.23	.12	.72
5. Future	—	—	—	—	.15*	.16*	-.12	.20**	-.01	.08	.10	.01	-.10	-.11	.03	.03	.65
6. Reflective	—	—	—	—	—	.48***	.40***	-.05	-.22***	-.09	-.18**	-.24**	-.37***	-.36***	-.24***	-.27***	.75
7. Affective	—	—	—	—	—	—	.38***	-.05	-.10	-.16*	-.21**	-.20**	-.27**	-.28***	-.30***	-.24**	.65
8. Cognitive	—	—	—	—	—	—	—	-.02	-.24***	-.01	-.13*	.01	-.15*	-.26***	-.24***	-.15*	.79
9. Identity	—	—	—	—	—	—	—	—	.16*	.71***	.71***	.71***	.61***	.56***	.67***	.87***	.79
10. Maladaptive	—	—	—	—	—	—	—	—	—	.12	.26***	.09	.35	.43	.41	.41	.57
11. Social	—	—	—	—	—	—	—	—	—	—	.81***	.71***	.67***	.53***	.65***	.84***	.82
12. Supportive	—	—	—	—	—	—	—	—	—	—	—	.75***	.74***	.63***	.74***	.90***	.77
13. Spontaneous	—	—	—	—	—	—	—	—	—	—	—	—	.74	.59***	.65***	.84***	.84
14. Ruminative	—	—	—	—	—	—	—	—	—	—	—	—	.74	.75***	.68***	.87***	.80
15. Confronting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.73	.81***	.75
16. Perspective	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.86	.70
17. IDAS-R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.92

Note: Variables: 1–5 - time perspectives; 6–8 - wisdom; 9–16 - internal dialogues; IDAS-R: Internal Dialogical Activity Scale—Revised.

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ .

bootstrapped samples and the corresponding 90% confidence intervals were computed. Other analyses were performed using SPSS v.24.

## Results

Prior to the main analysis, descriptive statistics were calculated and the assumptions of normality were tested. Using the Kolmogorov–Smirnov test with Lilliefors correction it was found that only the scores on the RW, AW, and CW (the 3D-WS) and the past-negative TP (ZTPI) met the assumptions of normality. Therefore, the skewness was analyzed in the next step. The scores on the three subscales of the 3D-WS (RW, AW, and CW) and the three subscales of the ZTPI (the past-positive, present-hedonistic, and future TPs) were slightly negatively skewed (from  $-0.02$  to  $-0.37$ ), while all the eight subscales of the IDAS-R and its general score and two subscales of the ZTPI (the past-negative and present-fatalistic TPs) were slightly positively skewed (from  $0.10$  to  $0.62$ ). All the coefficients of skewness were in the range from  $-1$  to  $1$ , so the skewness was not strong enough and could be ignored (George and Mallery, 2010).

Next, Pearson bivariate correlations for all the variables measured in the study were calculated. As we can see in Table 1, negative correlations between the past-negative TP and the three dimensions of wisdom were found. Similarly, negative links can be observed between the present-fatalistic TP and RW, AW, and CW. In both cases, the correlations with AW were weak but significant; thus, H1 was fully supported. It was also hypothesized (H2) that the past-positive and future TPs are positively correlated with the three wisdom dimensions. This was true only with reference to RW and AW. CW did not correlate significantly with the past-positive and future TPs; thus, H2 was confirmed only partially. Additionally, as expected according to H3, negative although weak correlations were found between the three wisdom dimensions and the ruminative as well as confronting IDs. Maladaptive IDs also correlated negatively with RW and CW but did not correlate significantly with AW; thus, H3 was supported partially.

At the same time, contrary to the expectations formulated on the basis of theory, it turned out that most IDs correlated negatively with wisdom. In fact, no type of ID correlated positively with any aspect of wisdom. More precisely, identity dialogues did not correlate with any dimension of wisdom. Social IDs did not correlate with RW and CW. Spontaneous IDs did not correlate with CW. Finally, as mentioned above, maladaptive IDs did not correlate with AW. In other cases, negative relationships with wisdom can be observed. In this context, further hypotheses regarding situations in which IDs reduce negative relationships with wisdom (H4–H5) or are conducive to the acquisition of wisdom (H6–H7) seem particularly worth verifying.

The last four hypotheses (H4–H7) were verified using moderation analyses. The conditional effects of the predictor (the given TP) were tested at values of the

low (16th percentile), medium (50th percentile), and high (84th percentile) levels of the moderator (the given type of ID). After verification of the hypotheses, additional moderation analyses were conducted. Each previously untested relationship of a TP (predictor) with each wisdom dimension (dependent variable) was analyzed, and all the types of IDs were successively introduced as moderators (Table 2).

According to H4, supportive and social IDs moderate the negative relationship between the past-negative TP and AW in such a way that the link loses significance with a high frequency of these IDs. As expected, only with a low frequency of supportive IDs could one observe that the more negatively the past was perceived, the lower the AW. With medium and high frequencies of supportive IDs, this relationship was non-significant. Similarly, with low and medium frequencies of social IDs, the past-negative TP and AW were reversely related. However, with a high frequency of social IDs, this relationship was insignificant. Thus, H4 was fully confirmed.

According to H5, perspective-changing IDs moderate the negative relationship between the present-fatalistic TP and RW. It was hypothesized that the link loses significance with a high frequency of these IDs. Indeed, it transpired that the relationship between the present-fatalistic TP and RW was negative for people with a low or medium frequency of these IDs; however, this link lost significance for people who frequently changed perspective. Thus, H5 was fully supported. Additionally, regardless of the hypothesis, it was found that supportive IDs moderated the above-mentioned relationship. The more frequent the supportive IDs, the weaker the negative relationship between RW and the present-fatalistic TP.

The next hypothesis, H6, assumed that supportive and social IDs moderate the relationship between the present-hedonistic TP and AW in such a way that the link is insignificant with a low frequency of these IDs; however, a high frequency of them is conducive to the acquisition of AW. H6 was fully confirmed. More precisely, the analyses revealed that, with a low frequency of supportive and social IDs, the relationship was not significant, but it became positively significant with a medium and high frequency of such IDs. In an additional analysis, an identical pattern was observed with reference to identity dialogues.

According to the last hypothesis, H7, identity dialogues moderate the relationship between the present-hedonistic TP and RW. A high frequency of these IDs was to be conducive to the acquisition of RW, whereas, with a low frequency of them, the analyzed link was to be insignificant. As it was hypothesized, with a low and a medium frequency of identity dialogues, the relationship was non-significant, but it became positively significant with a high frequency of such IDs. Thus, H7 was fully supported. Moreover, in additional analyses performed regardless of the hypothesis, it transpired that supportive and social IDs moderate the above-mentioned link in the same way as identity dialogues: with a low and a medium frequency of these IDs, the link was non-significant, but it became

**Table 2.** The significant moderations for temporal perspectives (the ZPTI) as an independent variable, the wisdom (the 3D-WS) as a dependent variable, and internal dialogues (the IDAS-R) as a moderator.

Time (IV)	Wisdom (DV)	Dialogues (MOD)	$R^2_{ch}$	B	t	90%CI	Interaction					
							Effect <sub>L</sub>	90%CI <sub>L</sub>	Effect <sub>M</sub>	90%CI <sub>M</sub>	Effect <sub>H</sub>	90%CI <sub>H</sub>
Past-negative	Affective	Supportive	.013	.027	1.77	[.002; .052]	-.23	[-.413; -.053]	-.10	[-.216; .017]	.02	[-.131; .176]
	Social	Social	.014	.029	1.83	[.003; .055]	-.28	[-.476; -.092]	-.14	[-.257; -.024]	<.01	[-.151; .158]
	Fatalistic	Reflective	.016	.040	2.03	[.008; .073]	-.45	[-.615; -.286]	-.33	[-.459; -.200]	-.17	[-.350; .014]
Cognitive	Supportive	Supportive	.012	.030	1.80	[.002; .058]	-.51	[-.693; -.316]	-.35	[-.480; -.225]	-.21	[-.395; -.033]
	Ruminative	Ruminative	.010	-.035	-1.76	[-.068; -.002]	-.66	[-.860; -.463]	-.80	[-.945; -.656]	-.98	[-1.191; -.760]
	Spontaneous	Spontaneous	.018	-.044	-2.40	[-.074; -.014]	-.61	[-.812; -.399]	-.83	[-.969; -.681]	-1.00	[-1.190; -.811]
	Supportive	Supportive	.011	-.036	-1.85	[-.067; -.004]	-.63	[-.845; -.417]	-.81	[-.954; -.664]	-.97	[-1.177; -.765]
	Social	Social	.009	-.030	-1.73	[-.059; -.001]	-.67	[-.873; -.461]	-.82	[-.962; -.673]	-.97	[-1.170; -.766]
Hedonistic	Supportive	Supportive	.016	-.042	-2.29	[-.072; -.012]	-.65	[-.838; -.458]	-.82	[-.960; -.671]	-1.03	[-1.231; -.819]
	Social	Supportive	.013	.025	1.81	[.002; .048]	<.01	[-.155; .158]	.13	[.025; .231]	.24	[.098; .389]
	Identity	Social	.015	.025	1.88	[.003; .047]	-.02	[-.178; .141]	.11	[.002; .210]	.23	[.088; .371]
Reflective	Supportive	Identity	.016	.027	1.94	[.004; .050]	<-.01	[-.141; .139]	.11	[.003; .213]	.24	[.088; .399]
	Social	Supportive	.020	.032	2.20	[.008; .057]	-.11	[-.273; .056]	.05	[-.055; .161]	.20	[.048; .354]
	Identity	Social	.026	.034	2.46	[.011; .057]	-.15	[-.318; .017]	.02	[-.088; .130]	.19	[.043; .341]
	Identity	Identity	.019	.031	2.10	[.007; .055]	-.09	[-.233; .061]	.04	[-.073; .146]	.19	[.027; .352]

Note: IV: independent variable; DV: dependent variable; MOD: moderator; IDAS-R: Internal Dialogical Activity Scale—Revised; ZPTI: Zimbardo Time Perspective Inventory; 3D-WS: Three-Dimensional Wisdom Scale; CI: confidence interval; Effect<sub>L,M,H</sub>: conditional effects of the predictor at values of the low (16th percentile), medium (50th percentile), and high (84th percentile) moderator, respectively. Only significant moderations are presented. On a gray background, moderations hypothesized.

positively significant with a high frequency of such dialogues. To sum up, a higher frequency of identity, supportive, and social IDs is conducive to the acquisition of RW and AW by people with the present-hedonistic TP.

Apart from these positive effects of IDs on wisdom, in additional analyses, it was found that ruminative, spontaneous, supportive, social, and identity IDs strengthen the negative link between the present-fatalistic TP and CW.

## Discussion

The study analyzed the poorly explored relationship between TPs, wisdom, and IDs. Given that only past-positive and future TPs correlate positively with wisdom, the main aim of the study was testing whether adaptive types of IDs (identity, social, supportive, and perspective-changing) weaken the negative relationships between the remaining TPs and wisdom or change their relationship to a positive one. Hypothesis 1, that the past-negative and present-fatalistic TPs correlate negatively with the three dimensions of wisdom, was fully supported. The result is consistent with the analysis of these TPs' correlates (Daugherty and Brase, 2010; Klingemann, 2001; Stolarski et al., 2014; Zhang and Howell, 2011; Zimbardo and Boyd, 1999). The correlates suggest not only a negative attitude toward time but above all a negative attitude toward oneself and the world. On the other hand, wisdom excludes a one-sided assessment of reality, and its essence is to seek balance (Sternberg, 1998), integration, or compromise, appreciating a broader perspective in looking at oneself and the world (Grossmann, 2017).

Hypothesis 2 assumed that the past-positive and future TPs coexist with the three dimensions of wisdom. The hypothesis was partially confirmed because no links between these TPs and CW were found. Admittedly, Webster et al. (2014), in their study, revealed the link between past-positive and future TPs and wisdom. However, unlike in this study, they measured wisdom in terms of Webster (i.e., using the SAWS) and not Ardel (i.e., using the 3D-WS). The study presented in this article showed that the past-positive and future TPs are associated with AW (sensitivity and understanding toward others) and RW (a multifaceted view). However, a positive attitude toward the past and the future does not guarantee CW, which is based on knowledge about the positive and negative aspects of human nature and on awareness of the limitations of knowledge and the unpredictability and uncertainty of life. Its result is the discovery of the deeper meaning of events. It seems that CW is a "superstructure" of the other dimensions. Therefore, it is worth looking for its determinants in further research.

Hypothesis 3, proposing that maladaptive, ruminative, and confronting IDs correlate negatively with the three dimensions of wisdom, was partially confirmed. Indeed, it turned out that ruminative and confronting IDs correlate negatively with every dimension of wisdom. Research on these variables has not been carried out before, while two other studies have revealed negative

correlations of ruminative and confronting IDs with well-being measured in accordance with an eudemonistic approach (Puchalska-Wasył and Zarzycka, 2020; Zarzycka and Puchalska-Wasył, 2020). This view of well-being calls on people to achieve eudemonic virtues (e.g., cooperative intentions and growth). Given that “Wise thinking shows convergent validity through robust associations to eudemonic virtues ...” (Grossmann, 2017: 235), the negative link between wisdom and ruminative as well as confronting IDs is understandable. Contrary to ruminative and confronting IDs, there are no previous reports of links between maladaptive IDs and well-being or wisdom. The reason may be that the measurement of maladaptive IDs has only recently been possible thanks to the revision of the IDAS. Taking into account the name and characteristics of maladaptive IDs (Oleś et al., 2020), their negative relationship with wisdom was hypothesized. In the present study, this found confirmation with reference to RW and CW but not to AW. On the one hand, this quite effectively proves the validity of the IDAS-R subscale measuring the frequency of maladaptive IDs, which was used in the present study. On the other hand, our finding shows that IDs that are perceived as undesirable or even irritating and disruptive to tasks (Oleś et al., 2020) do not have to be associated with insensitivity and aversion to people.

An unexpected result in the light of theory was that most IDs correlated negatively with wisdom. Can we explain this if perspective taking is a core of wisdom and at the same time seems to be the core of IDs? As Borawski (2017) claimed, wisdom is only favored by IDs that lead either to gaining new knowledge (through a change of perspective) or to integrating opposing viewpoints. It is conceivable that most human-led IDs do not integrate perspectives or broaden knowledge as these require cognitive effort and the willingness to seek the common and not only one’s own good. If a person is conducting IDs to prove to himself/herself that he/she is right at all costs, such IDs are even counter to wisdom. Such thinking would be consistent with research showing that certain types of IDs correlate weakly but positively with some pathological personality traits (Łysiak, 2019).

There may be also another explanation. Rakoczy et al. (2018) documented systematically within one and the same sample of subjects that the development of wisdom-related perspective taking and that of theory of mind (ToM) perspective taking in later adulthood are different. In line with this finding, one can pose an interpretative hypothesis that ID-related perspective taking and wisdom-related perspective taking are different facets of a very complex phenomenon and their expression can be different and maybe context dependent. Dependence on context could explain the fact observed in the present study that, in some configurations of variables, IDs reduce negative links to wisdom (H4–5) or even foster wisdom (H6–7), whereas in other configurations, IDs can be negatively related to wisdom (as mentioned above), or strengthen the negative link between a given TP and wisdom. The latter case refers to the situation of reinforcing the negative

relationship between the present-fatalistic TPs and CW through supportive, social, identity, spontaneous, and ruminative IDs. Only the effect of ruminative IDs can be considered easy to predict. Ruminative IDs involve blaming oneself, dwelling on failures, and recalling sad or upsetting thoughts or memories (Oleś et al., 2020). It therefore seems that these IDs contradict CW, which reflects the ability to understand the deeper meaning of events concerning both intrapersonal and interpersonal issues, and which is based on the knowledge of the positive and negative aspects of human nature (Ardelt, 2003).

Summarizing the effects of the verification of hypotheses 4–7, four types of IDs play a particularly positive role in the context of wisdom: perspective-changing, social, supportive, and identity. This is partly consistent with the findings of other authors. The relevance of perspective-changing IDs to wisdom seems to have been confirmed by Linden (2014). His wisdom therapy proposes that the client asks himself/herself questions that will enable a change of perspective, in dealing first with a fictional problem and then with the client's own problem. The influence of an imaginary dialogue with another person (social IDs) on manifestations of wisdom was observed in an experimental study by Staudinger and Baltes (1996). The participants were asked to consider aloud a problem with solutions that indicated different levels of wisdom. In the first group, finding a solution was preceded by a real discussion about the problem with a significant person. In the second group, the respondents conducted an ID with a person of their choice, while the participants from the third group were asked to think about the solutions themselves. It turned out that IDs, like real dialogues, increased the level of task performance by almost one standard deviation compared with the third group. Borawski (2017) also wrote about the role of social IDs in wise decisions. According to him, people facing existential dilemmas often consult in their imagination with various people who are important to them, acting as a mentor or authority. It is possible that these characters are also supportive, so social IDs would be combined with supportive IDs here. The author also emphasized the crucial role of identity IDs for gaining wisdom. They are IDs between at least two different aspects of the self, representing different needs and different positions. An individual, faced with an internal dilemma, considers alternative counseling "voices" instead of acting on the basis of an impulse coming from one source (one aspect of the self). Respecting each "voice" means that identity dialogues can contribute to the balancing of different viewpoints and in this sense to greater wisdom (Borawski, 2017).

## Limitations

All the results should be interpreted in the light of the limitations of the present study. The first weakness of the research is that its cross-sectional nature precludes us from making claims of causality. It means that we cannot be sure whether some



TPs promote wisdom or rather different levels of wisdom induce different attitudes toward time. It is conceivable that these relationships are mutual and bidirectional. Another shortcoming is that respondents in this study knew they were completing a wisdom questionnaire, which might have biased their answers in a more socially desirable and “wise” direction. Results might have been different if a performance-based wisdom measure had been used that was unaffected by social desirability bias. Other studies show that the correlations between measures of wisdom based on performance versus questionnaire do not exceed a moderate level, and sometimes are insignificant. A similar situation applies to correlations between the dimensions of wisdom measured in a declarative way; however, in this case, there are also negative correlations (e.g., Glück et al., 2013). There is also the question of whether the IDAS-R used in this study was the best method to examine those aspects of internal dialogical activity that potentially promote wisdom. Our findings showed that most IDs correlated negatively with wisdom. At the same time, another study using a previous version of this questionnaire (i.e., the IDAS) found that certain types of IDs correlated weakly but positively with some pathological personality traits (Łysiak, 2019). As it is the first research on the relationship between TPs, wisdom, and IDs, the results presented need replication, preferably using alternative methods.

## Implications

The findings are consistent with a constructivist rather than an essentialist model of wisdom. According to essentialism, a given characteristic is conceptualized as immutable, homogeneous, inherited, discrete, and natural, whereas constructivism assumes that a given characteristic may develop through the process of active construction. Grossmann (2017), who advocated for a constructivist model of wisdom, claimed that expression of wisdom varies across diverse situational contexts, which have the power to sustain or inhibit it. The present study shows some “dialogical contexts” in which different dimensions of wisdom (related to different TPs) can be enhanced or less blocked. Previous studies (Bruya and Ardel, 2018; Sharma and Dewangan, 2017) have already shown that wisdom can be taught, for example, in a traditional higher education setting. Given that ID is a psychotherapeutic instrument (Hermans and Dimaggio, 2004; Pollard, 2008), the results can be used in psychological practice to support clients’ development in terms of wisdom. These findings can also encourage independent work on oneself, especially for those who conduct IDs in everyday life but until now have not consciously used these dialogues as a tool for self-development.

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## Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The Research Ethics Committee at The John Paul II Catholic University of Lublin approved the study.

## Informed consent

Informed consent was obtained from all individual participants included in the study.

## Data availability

All relevant data are available in the KUL Institutional Repository.

## Code availability

<http://hdl.handle.net/20.500.12153/1348>

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