



HAL
open science

Discussing normative features of Future Time Perspective construct: Renewing with the Lewinian approach from a sociocognitive perspective

Séverin Guignard, Thémis Apostolidis, Christophe Demarque

► To cite this version:

Séverin Guignard, Thémis Apostolidis, Christophe Demarque. Discussing normative features of Future Time Perspective construct: Renewing with the Lewinian approach from a sociocognitive perspective. *New Ideas in Psychology*, 2014, 35, pp.1-10. 10.1016/j.newideapsych.2014.04.001 . hal-01953739

HAL Id: hal-01953739

<https://amu.hal.science/hal-01953739>

Submitted on 13 Dec 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

**Discussing normative features of Future Time
Perspective construct: Renewing with the Lewinian
approach from a sociocognitive perspective**

Séverin Guignard, Thémis Apostolidis, Christophe Demarque

► **To cite this version:**

Séverin Guignard, Thémis Apostolidis, Christophe Demarque. Discussing normative features of Future Time Perspective construct: Renewing with the Lewinian approach from a sociocognitive perspective. *New Ideas in Psychology*, Elsevier, 2014, 35, pp.1-10. <10.1016/j.newideapsych.2014.04.001>. <hal-01953739>

HAL Id: hal-01953739

<https://hal-amu.archives-ouvertes.fr/hal-01953739>

Submitted on 13 Dec 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Discussing normative features of Future Time Perspective construct: Renewing with the Lewinian approach from a sociocognitive perspective

Severin Guignard^{a,*}, Themis Apostolidis^a, Christophe Demarque^b

^a Aix Marseille Université, LPS EA 849, 13621, Aix en Provence, France

^b Toulouse le Mirail University, PDPS EA1687, Toulouse, France

A B S T R A C T

Keywords:

Future Time Perspective
Normativity
Social value
Social norm

Since the Zimbardo Time Perspective Inventory (ZTPI), an important body of research emerges on the Time Perspective (TP) construct and more specifically on the Future Time Perspective (FTP) dimension. However, a gap is growing between the psychosocial Lewinian approach to TP and the dispositional way it is operationalized in many studies nowadays. One way of underlining the psychosocial roots of TP and to show the problematic use of FTP in a personalistic manner is to highlight normative aspects of FTP. From a sociocognitive perspective, present research aims to examine the social valorization of FTP and to determine the type of social value associated with it in a French context. Results reveal the social valorization of FTP-ZTPI dimension and permit to discuss the normativity of this construct. We suggest that FTP might be normative because it refers to certain social expectations and ideologies in the context of contemporary Western societies.

«What then is Time? If nobody asks me I know; but if I were desirous to explain it to someone that should ask me, plainly I know not » (Saint Augustine, Confessions, Book XI, Chapter 14).

Time is a classical and fundamental topic in human thinking and behaviour. However, the problem of the definition of time has not been completely solved since Saint Augustine and still remains a theoretical question in all fields of research from physics to philosophy. How is time defined, measured and used as a scientific construct in human and social sciences? What relevant aspects of the individual time experience are related to objective, subjective or social time? By its inner ontological characteristics, time experience constitutes a valuable subject to

promote a psychosocial approach in the psychological study of time. This paper analyses the current development of psychology research about the Time Perspective construct and highlights the need to consider normative aspects of the Future Time Perspective by providing original empirical evidence.

1. Theoretical roots of the Time Perspective

From a sociological point of view, time could be considered as a permanent framework for mental life (Durkheim, 1912), a collectively shared representation allowing for collective organization of society. Bourdieu (1977) argues on the analogy between time structure and social organization structure in a given society. In psychology, time experience is mainly conceptualized through the Time Perspective (TP) construct (Lewin, 1942) defined as an interface between the psychological and the social reflecting “the totality of the individual’s views of his psychological future and psychological past existing at a given

* Corresponding author. Aix-Marseille Université, Laboratoire de Psychologie Sociale, 29 Avenue Robert Schuman, 13621 Aix-en-Provence, France.

E-mail address: severin.guignard@univ-amu.fr (S. Guignard).

time” (Lewin, 1951, p.75). Following the Lewinian theoretical framework, TP had been considered, in a broad conceptualization of psychological time, as a foundational process in both individual and societal functioning (Zimbardo & Boyd, 1999). Thus, numerous contributions highlighted the deep social and cultural anchoring of the TP construct (Bond & Smith, 1996; Jones, 1994; Levine, 1997; Lewin, 1951; Nuttin, 1977; Seginer & Halabi, 1991; Teahan, 1958). More recently, Zimbardo and Boyd (1999) stated that TP is acquired by socialization, intervenes in the elaboration of goals and has dynamic influence on numerous judgements, decisions and actions.

2. When the measurements reawaken the concept

The research work on TP seems to have benefited from a renewed interest in the last years, and nowadays generates an important amount of publications. A research by keywords in the PsycINFO database by searching “Time Perspective” keyword in title or abstract, indicates 751 articles with peer review from 1932 to 2013 (Fig. 1). Among these articles, 391 have been published since 2000 that is 52% of the whole database on TP. This particular attention for the TP construct occurs at the same time as the arrival of a valid and reliable scale, the Zimbardo Time Perspective Inventory (ZTPI, Zimbardo & Boyd, 1999). Among the 391 selected articles, 112 specified in their title or their abstract the instrument used for measuring TP. The ZTPI scale was mentioned by 76 of them (68% of the selected articles). This scale was validated through an exploratory and a confirmatory analysis which demonstrated acceptable psychometric properties (internal and test-retest reliability, for more details see Zimbardo & Boyd, 1999). Nowadays, the ZTPI is one of the most widely used measures of TP (Teuscher & Mitchell, 2011). The numerous adaptations and validations of the instrument in many countries attest of the scientific community’s interest to dispose of a general TP scale: France (Apostolidis & Fieulaine, 2004); Spain (Díaz-Morales, 2006); Mexico (Corral-Verdugo, Fraijo-Sing, & Pinheiro, 2006); Australia (Horstmanshof & Zimitat, 2007); Brazil (Milfont, Andrade, Belo, & Pessoa, 2008); Lithuania (Liniauskaitė & Kairys, 2009) Portugal (Ortuno & Gamboa, 2009); Greece (Anagnostopoulos & Griva, 2011); Czech Republic (Lukavská, Klicperová-Baker, Lukavský, &

Zimbardo, 2011), Sweden (Carelli, Wiberg, & Wiberg, 2011), for example. All these studies showed adequate psychometric properties of the ZTPI and established the predictive, convergent and discriminant validity of the instrument among various sociocultural contexts. More recently, a cross-cultural research among a large sample ($N = 12,200$) of 24 countries confirmed ZTPI as a valid and reliable index (construct equivalence and invariant structure across cultural traditions and language adaptations, see Sircova et al., 2014). Thus, this “new old” concept is now well established in psychology and has become a major concern for an increasing number of researchers who use the ZTPI scale. Due to this particular link between TP and the ZTPI scale, the present article will be focused on TP as it is measured by this instrument.

More specifically, we will focus on the Future sub-dimension of the Time Perspective (FTP). Indeed, currently a consequent number of studies in the TP framework are focused on FTP. Among the previous 391 articles inventoried in the PsycINFO database since 2000 containing the keyword “Time Perspective”, 141 mentioned “Future Time Perspective in their title or abstract. Among those 141 selected articles dealing with FTP, 26 specified the instrument used for measuring FTP in their title or their abstract and FTP-ZTPI subscale was mentioned by 14 of them (54% of the selected articles). This scale is defined as planning and goal-oriented attitude, expectations and an-ticipations of future rewards (e.g. item “I believe that a person’s day should be planned ahead each morning” or item “I make lists of things to do”; see Apostolidis & Fieulaine, 2004 for the French version of FTP-ZTPI sub-scale). This future scale suggests that behaviour is dominated by a striving for future goals and rewards (Zimbardo & Boyd, 1999).

Although the FTP subscale of the ZTPI showed its relevance to develop a deep trend of research on time perspective, it seems interesting to raise some issues about what is really measured by the ZTPI-FTP scale and how this construct is currently used in the scientific literature.

3. Future Time Perspective in current researches

The interest for this FTP construct could be explained to a large extent by the numerous studies which reported its

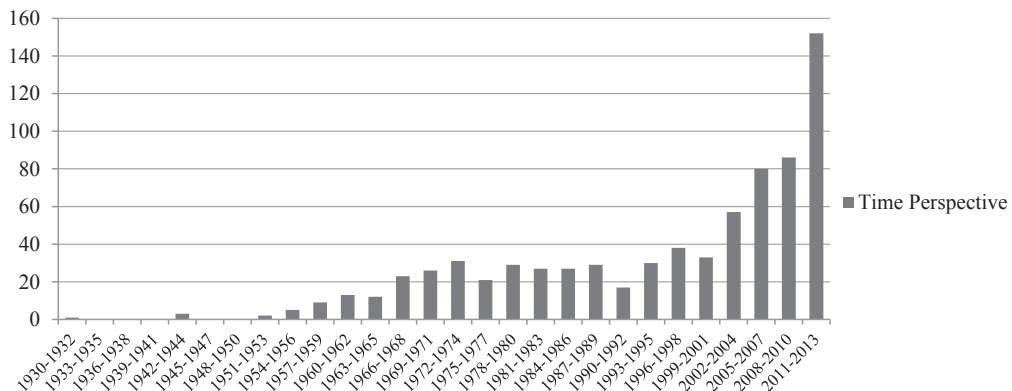


Fig. 1. Number of articles in PsycINFO database since 1930 which contained “time perspective” keyword in their title or abstract.

positive role (e.g. protector, facilitator) on pro-social behaviours in various areas as in health (Keough, Zimbardo, & Boyd, 1999), environment (Milfont & Gouveia, 2006; Milfont, Wilson, & Pollyane, 2012) or education (Harber, Zimbardo, & Boyd, 2003). From a critical analysis of recent research on FTP, one could argue that a general trend seems to emerge which consists in using the ZTPI-FTP construct as a dispositional variable. Indeed, even if FTP is generally presented and conceptualized as a psychosocial construct, FTP tends to be operationalized and used in studies as a personality construct. Thus, FTP seems to be principally used to highlight individual differences on social behaviours, for example concerning health behaviours (e.g. Adams & Nettle, 2009; Daugherty & Brase, 2010). This individual-differences approach to FTP presents interesting results about FTP outcomes on numerous behaviours. However, research is also needed to assess the social and psychological dynamics contributing to the elaboration of one's TP in order to approach personality variables not only as idiosyncratically properties of individuals but to a large extent as a social-psychological phenomenon. For advancing a broad conceptualization of TP, it is important to pay more attention to how this construct, generally considered as a personality variable, functions within the social context (Zimbardo & Boyd, 2008).

In fact, little is known about the psychosocial dynamics, which may intervene in the links between FTP and social functioning in the context of contemporary societies. When analysing the potential role of FTP in complex social behaviours, renewing with the Lewinian tradition to embrace a broader scope on social and societal stakes could further our understanding of such phenomena.

Indeed, some empirical findings suggest that FTP could have complex modes of intervention depending on the social and societal context. For example, Apostolidis, Fieulaine, Simonin, and Rolland (2006) showed a paradoxical role of the FTP construct measured by ZTPI regarding cannabis use. In line with the literature, they observed a protective role of FTP with respect to cannabis consumption by youngsters. But, at the same time, they reported that those among the consumers with high FTP were more inclined to use risk-denying strategies (negative link between use and risk representations). So, FTP does not have a systematically protective function towards cannabis use and seems to modulate sociocognitive defensive modes of acting (strategy of risk denial). Instead, this may be interpreted as a "self-serving cognitive strategy" (Gerrard, Gibbons, Reis-Bergan, & Russell, 2000) in order to manage the threat of social stigma related to public health and social conventions in the French context. Moreover, analogous socio-cognitive paradoxical aspects were identified in literature concerning interventions other personality variables (e.g. self-esteem, Gibbons, Eggleston, & Benthin, 1997). This is in line with more general patterns of findings which suggest that personality variables intervene in a dynamic interdependency with proximal variables (e.g. the mediational role of goals in the influence of resources on subjective well-being, see Diener & Fujita, 1995). Thus, findings concerning the ambiguous relations between FTP and complex social behaviours as cannabis use underline the need for better understanding

of the FTP intervention within the social context. Yet, further studies must be undertaken to provide suitable insights into the relations between FTP and wider social functioning.

4. Addressing the normativity of FTP

Widening the scope of analysis, one could wonder why the ZTPI-FTP construct is positively associated with the persistence of prosocial behaviour in various areas (health, environment, education). According to Zimbardo, Keough, and Boyd (1997), FTP oriented individuals "generally follow convention and social norms, generally doing what is good, right and proper" (p. 1020). Then, because FTP is associated with normative issues, it would be interesting to examine the assumption of its normative feature.

From a social psychological perspective, the study of normativity constitutes a relevant issue for analysing the links between individual's behaviour and social functioning. Based on Jellison' and Green' seminal work (1981), the sociocognitive approach to social norms (Dubois, 2003) provides a pertinent framework for the analysis of the normative dimensions of a psychological construct. From this perspective, the concept of norm cannot be dissociated from the notion of social value. According to Dubois (2003), a characteristic is normative if it is associated with positive evaluations (approval) and the ascription of social values (i.e. social utility or social desirability). The underlying idea is that the prescriptive power of norm induces socially valued behaviours. So, the inherent operating mode of norm is the assignment of social value to objects or persons. Along this line, behaviour is normative only if it is actually associated with a certain kind of social value. Indeed, the sociocognitive approach to social norms enables to undertake a psychosocial analysis of the normativeness of psychological constructs.

Even though this issue allows further understanding of the influence of these constructs on complex human behaviours, no empirical works have been dedicated to examine the normativeness of the ZTPI-FTP construct. Summing up, taking into account the previous remarks about the link between social dynamics and FTP and the lack of research on it, the study of the normative feature of this construct becomes a major concern.

The address of FTP normativity brings crucial methodological and theoretical stakes about measurement and conceptualization of this construct. Indeed if FTP is amply embedded in normativity, it raises the question of *what* does FTP concretely measure. It also raises the question *why* this specific construct is normative in our contemporary society. What is more, it could have implications about practical recommendations emanating from FTP applied research findings.

5. Overview of the present research

The present work aims to study the normative feature of the FTP construct as it is measured by the ZTPI scale. Hence, we implemented two classical methodological paradigms from the sociocognitive approach to social norms (Gilbert

& Cambron, 2003 for a detailed review of these paradigms). Two studies were conducted with two distinct, but related, goals: firstly, to test the hypothesis of the social valorization of FTP by mobilizing the self-presentation paradigm (Study 1); secondly, to analyse the type of social value associated with the construct (Study 2). In order to attain this second objective, we conducted a study based on the judge paradigm in two different contexts: in a professional context and in a leisure context.

6. Study 1: self-presentation paradigm

This methodological paradigm allows for testing social valorization related to FTP through strategic self-presentation. The present experimental situation implies different self-presentation demands in a professional context (i.e. a traineeship application). Our hypothesis is that the participants will tend to present themselves with high FTP if they seek to gain approval from a relevant evaluative referent and tend to present themselves with low FTP if they aim to gain disapproval.

6.1. Participants

One hundred and sixty-eight students (117 women, 51 men, $M_{age} = 20.73$, $SD = 3.28$) attending a degree course at University of Provence participated in the study.

6.2. Material

6.2.1. Future Time Perspective (FTP)

FTP was measured using the ZTPI in its validated French version (Apostolidis & Fieulaine, 2004). FTP subscale re-groups 12 items indicating a future orientated position, toward goals, anticipation and planning of activities. For each statement, the participants rated their level of agreement on a 5-point Likert-type scale, ranging from 1 (*this proposition does not at all apply to me*) to 5 (*this proposition applies exactly to me*).

6.3. Procedure

Each participant received a questionnaire and completed the ZTPI-FTP scale three times. Each presentation of the scale was preceded by a specific instruction for completion. Three instructions enabled to operationalize the paradigm of self-presentation:

- a) First condition: the participants were asked to answer the FTP scale spontaneously (standard instruction),

To reproduce a realistic evaluative situation for the second and the third condition, our participants were asked to imagine an establishment manager in charge of the processing of their application for traineeship who would know their replies to the questionnaire.

- b) Second condition: the participants were asked to answer the same scale in order to gain approval from an establishment manager (*normative instruction*),

- c) Third condition: the participants were asked to answer the scale in order to gain disapproval from an establishment manager (*counter-normative instruction*).

The first sub-questionnaire (*standard instruction*) was always in the first place, while the order of the other two sub-questionnaires (*normative* and *counter-normative instructions*) was systematically counterbalanced.

6.4. Measures

For each sub-questionnaire, the FTP score was calculated from the mean score of the replies to the 12 items. Thus, we obtained three scores for each participant.

6.5. Results

6.5.1. Standard instruction

With regards to standard instruction, internal consistency of the FTP scale was satisfactory ($n = 12$, $\alpha = .72$) and the mean score ($M = 3.31$, $SD = 0.56$) of our sample can be compared to the ones in literature dealing with similar samples (Apostolidis, Fieulaine, Simonin, et al., 2006: $M = 3.18$, $SD = 0.60$; Apostolidis, Fieulaine, & Soulé, 2006: $M = 3.27$, $SD = 0.55$).

6.5.2. Normative and counter-normative instructions

Internal consistency of the scale was excellent for normative ($n = 12$, $\alpha = .96$) and for counter-normative ($n = 12$, $\alpha = .97$) instructions. Two ANOVA were carried out in order to assess the effect of the order in which the instructions had been given. Even if analysis evidenced a significant effect of the order on the two FTP scores (normative instruction, counter-normative instruction), we decided to continue the assessment without taking into account the order effect, given that the two patterns of results were analogous.¹

FTP score (dependent variable) was submitted to an ANOVA with one within-subject independent variable: self-presentation instruction with three levels (standard, normative, counter-normative). The ANOVA revealed an effect of the self-presentation instruction on the FTP score, $F(2, 166) = 175.71$, $p < .001$, $\eta^2 = .51$. Bonferroni pairwise comparisons revealed that the mean score for normative instruction ($M = 4.18$, $SD = 1.11$) was higher than the one obtained for standard instruction ($M = 3.31$, $SD = 0.56$), which, in turn, was higher than the one for counter-normative instruction ($M = 1.84$, $SD = 1.20$, both p 's $< .001$). Hence, if the participants sought to gain approval (*normative instruction*), they presented themselves as oriented towards high FTP, whereas they

¹ With respect to the normative instruction, the participants that completed the scale of normative instruction first gave answers with higher scores ($M = 4.42$) than the ones who started with the counter-normative instruction scale ($M = 3.93$, $F(1, 166) = 8.92$, $p < .01$, $\eta^2 = .06$). With respect to the score of counter-normative instruction, the participants who completed the normative instruction scale first had lower scores ($M = 1.15$) than the ones who started with the scale of counter-normative instruction ($M = 2.17$, $F(1, 166) = 14.17$, $p < .001$, $\eta^2 = .08$).

presented themselves little oriented towards FTP if they wanted to gain disapproval (*counter-normative instruction*; see Fig. 2).

6.6. Discussion

The results strongly support the hypothesis of social valorization of FTP. First of all, the instructions of the self-presentation paradigm highly influenced the FTP scores. When the instruction asked for a positive self-presentation, the participants gave more FTP oriented answers than in the standard situation. The polarization of the answers according to normative or counter-normative instructions and the significant difference between the three scores suggest that high social value is inherent in FTP.

Furthermore, these results revealed the implicit normative issues involved in the completion of the FTP subscale of ZTPI. Depending on the context of assessment, the answers of the participants could be oriented by normative regulations. These findings strongly attest of the social valorization of FTP and invite to a closer look at the kind of associated social values. This investigation was the object of Study 2, using the judge paradigm.

7. Study 2: judge paradigm in two evaluation contexts

The judge paradigm consists in assigning to participants the role of evaluators who have to give an appreciation about someone else (the target profile). This method is specially used in the sociocognitive approach to social norms (Dubois, 2003) because it permits to highlight the kind of social value assigned to target profiles endorsing normative characteristics.

Generally, two dimensions of social value capturing normativity are distinguished, even if these dimensions are given various names: value and dynamism (Osgood, Suci, & Tannenbaum, 1957), social positivity/negativity and intellectual positivity/negativity (Rosenberg & Sedlack, 1972), affiliation and status (Wiggins, 1979), other-profitability and self-profitability (Peeters, 2001), warmth and competence (Fiske, Cuddy, Glick, & Xu, 2002), social utility and social desirability (Beauvois, 1995). Among all these perspectives, the theoretical interpretation of the two

dimensions proposed by Beauvois has been chosen here. According to this author, the first dimension, social desirability, reflects the 'likeableness' one can attribute to a person in his/her relationships with others (Dubois & Beauvois, 2005). The second dimension, social utility, reflects our knowledge about an individual's chances for success or failure in social life correlated to the degree to which he matches the social expectations of his environment (Dubois, 2003).

In general terms, it seems that social norms of judgement are mainly associated with social utility value but not with social desirability value (Dubois & Beauvois, 2011). This distinction between the two dimensions of social value becomes essential for the study of the normativity of a psychological construct (Dubois, 2003). Moreover, distinguishing social utility from social desirability also questions the social context induced by the situation.

In the present study, participants had to judge a target person having completed the FTP scale of ZTPI (high versus low FTP target) in the same context as in Study 1 (i.e. a traineeship application) or in a leisure context (i.e. a request for leisure participation). The judgements participants formed were about the target's social values (social utility and social desirability values) and the acceptance of the integration request.

Our hypothesis was that participants would attribute a higher social utility value to a high FTP target compared to a low FTP target and no difference of judgement between these two types of targets on social desirability value. These predictions were based on the fact that generally, to be normative, an event must be particularly socially useful (Dubois & Beauvois, 2005). Concerning the acceptance of the integration request, we hypothesized that the high FTP target would be generally more accepted than the low FTP one. Finally, regarding the context of judgement, we expected that this independent variable would have no effect on the attribution of social values but on the acceptance of the target. Thus, we predicted an interaction effect between the context of judgement and the level of FTP of the target where the traineeship application context would accentuate the effect of the FTP target level on the decision of acceptance.

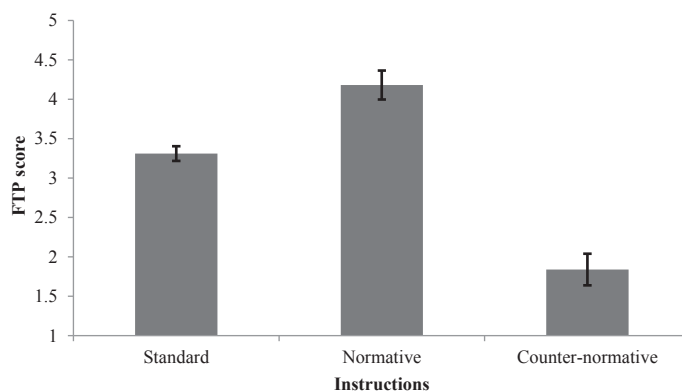


Fig. 2. Future Time Perspective (FTP) mean scores in the three types of instructions (Study 1). Bars represent Inferential Confidence Intervals (ICI; see Tryon & Lewis, 2008).

7.1. Participants

Four hundred forty six students (318 women, 128 men, $M_{\text{age}} = 20.27$, $SD = 4.43$) attending a degree course in social sciences at University of Provence participated in the study.

7.2. Procedure

7.2.1. Manipulation of FTP profiles

Four target profiles were elaborated by manipulating the target FTP (low vs. high) and gender. Profiles were designed to be credible and authentic to our cohort therefore, their reply-patterns were clearly differentiated by their FTP degrees. Thus, we used the mean FTP score previously obtained with student populations (Apostolidis, Fieulaine, Simonin, et al., 2006: $M = 3.18$, $SD = 0.60$) as reference value, to which we added two standard deviations (high FTP profile: 4.25) and subtracted two standard deviations (low FTP profile: 1.75). Target gender was manipulated through the name of the student who had completed the questionnaire (Lea vs. Pierre). The completed FTP scale was presented as an authentic questionnaire filled out by a student and was hand-written to increase authenticity. Only age (21 years) and name were visible. The surname had been crossed out with a marker pen to create anonymity.

7.2.2. Manipulation of the evaluation contexts

Two different contexts of evaluation were implemented: one concerning a professional context and the second concerning a leisure context. For the first context about a professional sphere, we presented a questionnaire supposedly extracted from an application for traineeship. Participants were told that a student interested in getting a job had filled out this questionnaire during a procedure of recruitment. For the second context, in order to operationalize an evaluation context focused on the leisure sphere significant for our student population, we presented a questionnaire supposedly extract from on a social network. Participants were told that a student interested in participating in a leisure group had filled out this questionnaire. In order to render the situation more credible, the questionnaires had a similar layout to the one used in internet social networks (as Facebook).

Then, all participants were handed out a booklet (distributed randomly). The instructions were on the first page. The second page contained one of two FTP scales supposedly filled out by a student in one of the two previously presented contexts. The instructions said to study carefully the answered FTP questionnaire. Then they were asked to evaluate that target student on a series of questions.

7.3. Measures

7.3.1. Manipulation check

In order to control the effectiveness of the FTP induction participants completed three questions from the Consideration of Future Consequences scale (CFC, Strathman, Gleicher, Boninger, & Edwards, 1994) in its validated French version (Demarque, Apostolidis, Chagnard, & Dany,

2010). The instructions were to indicate on a 5-point Likert-type scale if each item was or was not characteristic of the target profile, ranging from 1 (*not applicable at all*) to 5 (*fully applicable*). Because CFC scale is strongly correlated with the FTP subscale of ZTPI ($r = .67$, $p < .01$, Zimbardo & Boyd, 1999), we expected the target profile with high FTP to be marked by the future answers of CFC and inversely for the low FTP target profile.

7.3.2. Measures of social desirability and social utility

Social desirability and social utility were approached through the attribution of personality traits to the target. Participants had to judge the target on the basis of a 12-item list of personality traits selected among the material tested by Cambon (2006) separating traits in relation with the social utility value from those with the social desirability value. We retained three positive traits of social utility (dynamic, ambitious, hardworking), three negative traits of social utility (naive, shy, emotional), three positive traits of social desirability (sympathetic, sincere, nice) and three negative traits of social desirability (egoistic, pretentious, hypocrite). The order of presentation of the traits in the list was randomized. The participants had to assess the target on each trait on a scale ranging from 1 (*not at all*) to 7 (*entirely*).

7.3.3. Acceptance of the integration request

In each of the two studies, participants were asked to evaluate the probability, in percentage, of acceptance of the target into the immediate context. The scale had 11 points from 0% (*not at all likely*), then ten by ten until 100% (*most likely*). This last dependent variable was important because it permitted to decentre participants from personal assessments and rather evaluate adjustment to the present situation requirements. Furthermore, it gave additional information concerning FTP social functioning depending on the context.

7.4. Results

7.4.1. Manipulation check

Did the experimental induction concerning FTP profiles work? Starting from 3 items of CFC ($\alpha = .90$), we created a score concerning the perception of the target. We carried out an ANOVA with the target FTP profile as independent variable and the CFC score as dependent variable. The profile with high FTP was perceived as having a higher score of CFC ($M = 4.22$) than the low FTP profile ($M = 1.69$, $F(1, 444) = 1401.49$, $p < .0001$, $\eta^2 = .76$). In order to exclude all the participants where the experimental induction failed, we eliminated the participants with a CFC score above three for the condition low FTP and the participants with a CFC score below three for the condition high FTP. Relatively few individuals were concerned by the exclusion procedure of the data set ($n = 20$). In the end, four hundred and twenty six participants were retained for analysis.

7.4.2. Analysis plan

For each dependent variable an ANOVA was carried out with a pattern of four independent between subject variables: 2 (target FTP profile) \times 2 (context of judgement) \times 2 (target gender) \times 2 (participant gender).

7.4.3. Utility and desirability

Two scores were computed from the 6 items related to social desirability ($\alpha = .70$) and the 6 items related to social utility ($\alpha = .66$). The ANOVA revealed a main effect of the target FTP profile on social utility. Neither target gender nor participant gender nor the context of judgement revealed significant effects (Table 1). The high FTP target was judged to be more useful ($M = 5.19$) than the low FTP target ($M = 3.49$, $F(1, 424) = 393.05$, $p < .0001$, $\eta^2 = .50$). Only one interaction effect was found between participant gender and the context of judgement on social utility, $F(2, 423) = 4.52$, $p < .05$, $\eta^2 = .01$. Male participants judged less with utility value targets in a professional context ($M = 4.21$) than female participants ($M = 4.43$) whereas male participants judged more with utility value targets in a leisure context ($M = 4.45$) than female participants ($M = 4.32$). Concerning social desirability, the ANOVA revealed no significant effects of target profile ($F(1, 424) = .13$, *ns*), target gender ($F(1, 424) = .45$, *ns*), participant gender ($F(1, 424) = .04$, *ns*) nor the context of judgement ($F(1, 424) = 2.66$, *ns*). Analysis did not reveal any interaction effects on social desirability.

7.4.4. Acceptance of the integration request

Concerning the probability of the target to be accepted, the ANOVA showed a simple effect of target profile, $F(1, 403) = 158.95$, $p < .0001$, $\eta^2 = .29$. The high FTP target was evaluated as more likely to be accepted ($M = 7.64$) than the low FTP target ($M = 4.59$). The ANOVA also revealed a simple effect of the context request, $F(1, 403) = 26.39$, $p < .0001$, $\eta^2 = .06$. Targets were more accepted in the leisure context ($M = 6.52$) than in the professional context ($M = 5.67$). The ANOVA showed a small effect of participant gender (male $M = 6.15$, female $M = 6.09$, $F(1, 403) = 6.19$, $p < .05$, $\eta^2 = .02$). Target gender did not reveal a significant effect ($F(1, 403) = .08$, *ns*). The analysis revealed an interaction effect between FTP target profile and context of judgement, $F(2, 402) = 71.43$, $p < .0001$, $\eta^2 = .16$. The difference of the evaluation of acceptance was stronger between a high FTP target ($M = 8.18$) and a low FTP target ($M = 3.11$) in a professional context, whereas it was weaker in a leisure context (respectively, $M = 7.38$ and $M = 6.38$; see Fig. 3). Analysis did not reveal any other interaction effects on acceptance of the integration request.

7.5. Discussion

The results obtained here about FTP target acceptance depending on the context of evaluation gives a coherence to the whole previous experimental findings. Indeed, we

first observed a general valorization of the FTP profile target in both contexts. The probability to be recruited in the professional as in the leisure context was evaluated more favourable to the high than to the low FTP target. It should be noticed that participant gender and target gender did not affect these evaluations.

On the whole, these results confirmed the valorization of the high FTP target. As expected, regarding the social utility value, the judgements made showed the anchoring of FTP in this dimension. Given the size of the observed effect, this finding is robust. However, FTP was not linked to the dimension of social desirability. This result is coherent with those obtained in studies of normativity which generally show a negative link between normativity and social desirability or an absence of such a link (Cambon, Djouari, & Beauvois, 2006; Dubois & Beauvois, 2005).

Together, the results of Studies 1 and 2 demonstrated the valorization of FTP on the basis of standard procedures used in the judgement norm paradigms. Moreover, they showed that this valorization appeared in different evaluation contexts.

However, although the FTP orientation of the target seemed a determining factor for the prediction of success in professional context, this information was rather less important in a leisure context. In other words, the social advantages associated with FTP valorization remained more important in a professional context clearly marked by competency than in a leisure context. Thus, we demonstrated that FTP was extremely linked with social utility value and that this characteristic of FTP had different consequences depending on the context. In other words, the social advantages associated with FTP valorization remained more important in a professional context clearly marked by the need to appear competent.

Nevertheless, one of the limitations is that the leisure evaluation context we used can be interpreted as a context in which one may need to emphasize certain social utilities (be dynamic within a group, organize trips and leisure activities, etc.). Future research works should examine the role of the evaluation context in situations where it significantly actualizes social desirability. However, it is difficult to find behaviours (and a fortiori situations), which manipulate one dimension without affecting the other (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005).

8. General discussion

The present work adds an important contribution to the literature on Time Perspective by examining FTP from a sionormative point of view. The set of findings of the two

Table 1

Means and standard deviations of the four independent variables concerning social utility (Study 2).

	Social utility		F	η^2
	M (SD)	M (SD)		
FTP target profile	$M_{Low} = 3.49 (0.64)$	$M_{High} = 5.19 (0.68)$	393.05***	.50
Context of judgement	$M_{Professional} = 4.37 (1.07)$	$M_{Leisure} = 4.43 (1.10)$.73	.01
Target gender	$M_{Male} = 4.41 (1.06)$	$M_{Female} = 4.32 (1.09)$	2.28	.01
Participant gender	$M_{Male} = 4.24 (1.03)$	$M_{Female} = 4.42 (1.09)$.28	.01

Level of significance: *: $p < .05$, **: $p < .01$, ***: $p < .001$.

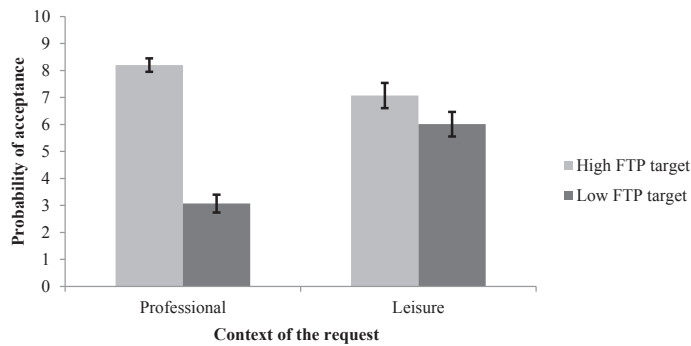


Fig. 3. Acceptance of Future Time Perspective (FTP) target depending on the context of the request (Study 2). Bars represent Inferential Confidence Intervals (ICI; see Tryon & Lewis, 2008).

conducted studies offers original data on the normativity of the ZTPI-FTP and sociocognitive functioning actualized through this construct in situations of self-presentation and judgement of others. On the basis of these results, we can conclude that FTP, as it is measured by the FTP subscale of the ZTPI, is a normative construct. Indeed, the participants present themselves with high FTP if they seek to gain approval (Study 1) and, on the whole, attribute more value to the high FTP target than to the low FTP target (Study 2). More precisely, we demonstrated that the normative feature of FTP was anchored mainly in social utility value and was associated with benefits in evaluation contexts. On the other hand, FTP seems little concerned by the social desirability value, even in an evaluation context focused on the leisure sphere (Study 2). Regarding the coherence of the whole pattern of results and the strong sizes of effects, these findings attest to significant FTP valorization. Moreover, they invite to further discussion of the role FTP can play in individuals' judgement in the context of social relations.

These findings enable us to uncover a new feature of the FTP construct showing that it constitutes a criterion, a reference for social valorization in social situations of self-presentation and judgement of others.

9. Discussing the measurement of FTP

These results must be discussed taking into account the instrument we used for the assessment of FTP. As we said previously, the choice of ZTPI can be explained by the fact that ZTPI is one of the most currently used scales in research work on FTP. In fact, the pertinence of the choice of the FTP construct as it is measured by this scale is reinforced by its numerous and various replications and current uses over the world. However, the experience of future psychological time cannot be limited to its measure on the future subscale of ZTPI which is mainly focused on the dimensions of planning, programming and anticipating.

It would be interesting to replicate these studies by using a different FTP measure in order to see if the observation on the normativity of this construct can be extended to other dimensions modelling the experience of the psychological future time (e.g. CFC, Strathman et al., 1994; Time Orientation Scale, Holman & Silver, 1998; Future Time

Perspective Scale, Lang & Carstensen, 2002). Nevertheless, strong correlations were reported in the literature between the ZTPI-FTP subscale and the CFC scale for instance. What is more, we used the CFC scale in our study design as manipulation check. We also observed a strong association between the FTP target profile and the evaluation of his/her FTP orientation measured with the CFC scale.

Beyond these remarks, our studies revealed that FTP measurement is highly related to normative judgements. The endorsement of an FTP profile seems to be linked to the notion of being competent and of being an efficient agent. Then, the strong association of FTP with social utility may be interpreted as internalization by individuals of society's requirements (Beauvois, 2005). This seems coherent with the remarks of Zimbardo et al. (1997), referring to persons oriented towards the future as persons who follow conventions and social norms.

After all, it becomes interesting to go further in the analysis of ZTPI-FTP normativity and to envisage the assumption of FTP as a contemporary social norm. This theoretical question is important because it permits to consider FTP from an alternative point of view and then to analyse current uses of FTP. For example, researchers often suggest intervention for changing one's FTP in order to realize a positively valued outcome on health-promoting. Developing temporal training to promote "useful time perspectives" (Boyd & Zimbardo, 2005) represents a significant applied outcome in this framework. However, if we may consider FTP as a social norm, such approach could also be questionable given the ethical or even the ideological implications of such intervention strategies (e.g. acquiring a protective temporal frame as a way to participate in social reproduction through a valorized social status).

10. FTP as a social norm?

Such assumption leads us to consider the necessity of investigating the social expectations and needs attached to the social functions of FTP in order to understand why looking to the future represents a useful strategy to be well-seen.

Arguably, the social functions of FTP need to be analysed at an ideological level (Doise, 1982), in order to

explain the valorization of a psychological construct in a given group, society or culture. Therefore, it is interesting to point out that the logic underlying the experience of the psychological future, as it is measured by FTP in terms of planning, anticipation and programming, reminds of the principles identified by Foucault (1979) in his analysis of social governance supporting the institutions in the era of biopolitics. In Foucault's view, anticipation and mathematical forecast of the future are the instruments of the political rationality of liberalism, whereas law and disciplinary mechanisms were those of previous regimes. For Foucault, Western societies can be characterized by a new vision of mankind, the model of the homo-oeconomicus, an economic agent who, through coercive and normative pressure has to think his existence in terms of "enterprise" (i.e. in terms of self-management under the aspect of economic rationality: anticipation of costs and benefits, activity planning, etc.). According to Foucault, this neo-liberal art of governing goes hand in hand with intellectual techniques fostering the extension of the model to all the areas of social and private life. One could then legitimately wonder about the place of psychological anticipation of the future as one of the so-called "technologies of the self" by which individuals constitute themselves within and through systems and strategies of power. Thus, the results obtained through the self-presentation paradigm showed a widely shared knowledge about the normative way to present oneself as oriented to the future in an ordinary social evaluative context. From our perspective, the FTP construct measured by the ZTPI scale seems to have a number of features that bring it close to one of these intellectual techniques in terms of psychological modelling and social performance. The anchoring of the related FTP construct in the social utility value supports this interpretation. In our view, this kind of macro-social and ideological analysis of the social functions of this FTP construct illustrates the interest of a holistic conceptualization, which renews with the foundations of Lewin's dynamic approach to the psychological time experience (Lewin, 1942). Our contribution argues to re-embrace Lewin's work by articulating psychological and social phenomena (e.g. self-knowledge and experience and contemporary regime of social control).

To conclude, the analysis of FTP normative anchoring highlights the need for further research aimed at a more detailed understanding of this construct as a social norm. Our findings provide new empirical evidence about the existence of complex sociocognitive functioning related to the social valorization of the FTP construct as it is currently used in many researches in psychology. Therefore, although individual-differences approaches provide a useful framework in understanding TP outcomes, these considerations highlight the need to develop broader research on TP taking into account the influence on people's experience and behaviours of social forces operating in a societal context (Oishi, Kesebir, & Snyder, 2009). Our findings underline the relevance of the Lewinian postulate of a circular interdependence between individuals and their environment when analysing psychological phenomena in the collective reality created by groups, institutions and societies. Future research on TP using the paradigm of social norms will lead

to a deeper understanding of the socionormative and cultural anchoring of time subjective experience in a perspective of societal social psychology.

References

- Adams, J., & Nettle, D. (2009). Time perspective, personality and smoking, body mass, and physical activity: an empirical study. *British Journal of Health Psychology*, 14(1), 83–105. <http://dx.doi.org/10.1348/135910708X299664>.
- Anagnostopoulos, F., & Griva, F. (2011). Exploring Time Perspective in Greek Young Adults: validation of the Zimbardo Time Perspective Inventory and Relationships with Mental Health Indicators. *Social Indicators Research*, 106(1), 41–59. <http://dx.doi.org/10.1007/s11205-011-9792-y>.
- Apostolidis, T., & Fieulaine, N. (2004). Validation française de l'échelle de temporalité: the Zimbardo Time Perspective Inventory [French validation of the temporality scale: The Zimbardo Time Perspective Inventory]. *European Review of Applied Psychology*, 54, 207–217. <http://dx.doi.org/10.1016/j.erap.2004.03.001>.
- Apostolidis, T., Fieulaine, N., Simonin, L., & Rolland, G. (2006). Cannabis use, time perspective and risk perception: evidence of a moderating effect. *Psychology & Health*, 21, 571–592. <http://dx.doi.org/10.1080/14768320500422683>.
- Apostolidis, T., Fieulaine, N., & Soulé, F. (2006). Future time perspective as predictor of cannabis use: exploring the role of substance perception among French adolescents. *Addictive Behaviors*, 31(12), 2339–2343. <http://dx.doi.org/10.1016/j.addbeh.2006.03.008>.
- Beauvois, J.-L. (1995). La connaissance des utilités sociales [The knowledge of social utilities]. *Psychologie Française*, 40, 375–387.
- Beauvois, J.-L. (2005). *Les illusions libérales, individualisme et pouvoir social* [Liberal illusions, individualism, and social power]. Grenoble: Presses Universitaires de Grenoble.
- Bond, M. H., & Smith, P. B. (1996). Cross-cultural social and organizational psychology. *Annual Review of Psychology*, 47, 205–235. <http://dx.doi.org/10.1146/annurev.psych.47.1.205>.
- Bourdieu, P. (1977). *Algérie 60 : structures économiques et structures temporelles* [Algeria 60: Economic structures and temporal structures]. Paris: Edition de Minuit.
- Boyd, J. N., & Zimbardo, P. G. (2005). Time perspective, health and risk taking. In A. Strahman, & J. Joireman (Eds.), *Understanding behavior in the context of time: Theory, research and applications* (pp. 85–107). Mahwah, N. J.: Erlbaum.
- Cambon, L. (2006). Désirabilité sociale et utilité sociale, deux dimensions de la valeur communiquée par les adjectifs de personnalité [Social desirability and social utility, two dimensions of value given by personality traits]. *Revue Internationale de Psychologie Sociale*, 19, 125–151.
- Cambon, L., Djouari, A., & Beauvois, J.-L. (2006). Social judgment norms and social utility: when it is more valuable to be useful than desirable. *Swiss Journal of Psychology*, 65, 167–180. <http://dx.doi.org/10.1024/1421-0185.65.3.167>.
- Carelli, M. G., Wiberg, B., & Wiberg, M. (2011). Development and construct validation of the Swedish Zimbardo Time Perspective Inventory. *European Journal of Psychological Assessment*, 27(4), 220–227. <http://dx.doi.org/10.1027/1015-5759/a000076>.
- Corral-Verdugo, V., Fraijo-Sing, B., & Pinheiro, J. Q. (2006). Sustainable behavior and time perspective: Present, past, and future orientations and their relationship with water conservation behavior. *Interamerican Journal of Psychology*, 40, 139–147.
- Daugherty, J. R., & Brase, G. L. (2010). Taking time to be healthy: predicting health behaviors with delay discounting and time perspective. *Personality and Individual Differences*, 48(2), 202–207.
- Demarque, C., Apostolidis, T., Chagnard, A., & Dany, L. (2010). Adaptation et validation française de l'échelle de perspective temporelle Consideration of future consequences (CFC) [Adaptation and French validation of the time perspective scale Consideration of future consequences (CFC)]. *Bulletin de Psychologie*, 63, 351–360.
- Díaz-Morales, J. F. (2006). Factorial structure and reliability of Zimbardo Time Perspective Inventory. *Psichotema*, 18, 565–571.
- Diener, E., & Fujita, F. (1995). Resources, personal strivings, and subjective well-being: a nomothetic and idiographic approach. *Journal of Personality and Social Psychology*, 68(5), 926–935.
- Doise, W. (1982). *L'explication en Psychologie Sociale* [Levels of explanation in social psychology]. Paris: Presses Universitaires de France.
- Dubois, N. (2003). *A sociocognitive approach to social norms*. London: Routledge.

- Dubois, N., & Beauvois, J.-L. (2005). Normativeness and individualism. *European Journal of Social Psychology, 35*, 123–146. <http://dx.doi.org/10.1002/ejsp.236>.
- Dubois, N., & Beauvois, J.-L. (2011). Are some rabbits more competent and warm than others? Lay epistemology is interested in object value but not in descriptive parameters. *Swiss Journal of Psychology, 70*(2), 63–73. <http://dx.doi.org/10.1024/1421-0185/a000040>.
- Durkheim, E. (1912). *Les formes élémentaires de la vie religieuse [The elementary forms of religious life]* (4th ed.). Paris: PUF, 1960.
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*(6), 878–902. <http://dx.doi.org/10.1037/0022-3514.82.6.878>.
- Foucault, M. (1979). *Naissance de la biopolitique: Cours au collège de France [The Birth of biopolitics: Lectures at the college of France]*. Paris: Seuil.
- Gerrard, M., Gibbons, F. X., Reis-Bergan, M., & Russell, D. W. (2000). Self-esteem, self-serving cognitions, and health risk behavior. *Journal of Personality, 68*(6), 1177–1201. <http://dx.doi.org/10.1111/1467-6494.00131>.
- Gibbons, F. X., Eggleston, T. J., & Benthin, A. C. (1997). Cognitive reactions to smoking relapse: the reciprocal relation between dissonance and self-esteem. *Journal of Personality and Social Psychology, 72*(1), 184–195.
- Gilibert, D., & Cambon, L. (2003). Paradigms of the sociocognitive approach. In N. Dubois (Ed.), *A sociocognitive approach to social norms* (pp. 38–69). London: Routledge.
- Harber, K. D., Zimbardo, P. G., & Boyd, J. N. (2003). Participant self-selection biases as a function of individual differences in time perspective. *Basic and Applied Social Psychology, 25*(3), 255–264.
- Holman, E. A., & Silver, R. C. (1998). Getting «stuck» in the past: temporal orientation and coping with trauma. *Journal of Personality and Social Psychology, 74*(5), 1146–1163.
- Horstmanshof, L., & Zimitat, C. (2007). Future time orientation predicts academic engagement among first-year university students. *British Journal of Educational Psychology, 77*(3), 703–718. <http://dx.doi.org/10.1348/000709906X160778>.
- Jellison, J. M., & Green, J. (1981). A self-presentation approach to the fundamental attribution error: the norm of internality. *Journal of Personality and Social Psychology, 40*(4), 643–649.
- Jones, J. M. (1994). An exploration of temporality in human behavior. In R. C. Schank, & E. Langer (Eds.), *Beliefs, reasoning and decision-making: Psycho-logic in honor of Bob Abelson* (pp. 389–411). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology, 89*(6), 899–913. <http://dx.doi.org/10.1037/0022-3514.89.6.899>.
- Keough, K. A., Zimbardo, P. G., & Boyd, J. N. (1999). Who's smoking, drinking, and using drugs? Time perspective as a predictor of substance use. *Journal of Basic and Applied Social Psychology, 21*(2), 149–164.
- Lang, F. R., & Carstensen, L. L. (2002). Time counts: future time perspective, goals, and social relationships. *Psychology and Aging, 17*(1), 125–139. <http://dx.doi.org/10.1037/0882-7974.17.1.125>.
- Levine, R. (1997). *A geography of time: The temporal misadventures of a social psychologist, or how every culture keeps time just a little bit differently*. New York: Basic Books.
- Lewin, K. (1942). Time perspective and morale. In G. Watson (Ed.), *Civilian morale* (pp. 48–70). Boston: Houghton Mifflin.
- Lewin, K. (1951). *Field theory in social science*. New York: Harper.
- Liniauskaitė, A., & Kairys, A. (2009). The Lithuanian version of the Zimbardo Time Perspective Inventory (ZTPI). *Psichologija, 40*, 66–87.
- Lukavská, K., Klicperová-Baker, M., Lukavský, J., & Zimbardo, P. G. (2011). ZTPI—Zimbardův Dotazník Časové Persektivy. *Československá Psychologie, 55*(4), 356–373.
- Milfont, T. L., Andrade, T. L., Belo, R. P., & Pessoa, V. S. (2008). Testing Zimbardo time perspective inventory in a Brazilian sample. *Inter-american Journal of Psychology, 42*, 49–58.
- Milfont, T. L., & Gouveia, V. V. (2006). Time perspective and values: an exploratory study of their relations to environmental attitudes. *Journal of Environmental Psychology, 26*(1), 72–82. <http://dx.doi.org/10.1016/j.jenvp.2006.03.001>.
- Milfont, T. L., Wilson, J., & Diniz, P. (2012). Time perspective and environmental engagement: a meta-analysis. *International Journal of Psychology, 47*(5), 325–334.
- Nuttin, J. R. (1977). La perspective temporelle dans le comportement humain [Time perspective in human behavior]. In P. Fraisse (Ed.), *Du temps biologique au temps psychologique* (pp. 307–363). Paris: Presses Universitaires de France.
- Oishi, S., Kesebir, S., & Snyder, B. H. (2009). Sociology: a lost connection in social psychology. *Personality and Social Psychology Review, 13*(4), 334–353. <http://dx.doi.org/10.1177/1088868309347835>.
- Ortuno, V., & Gamboa, V. (2009). Estrutura factorial do Zimbardo Time Perspective Inventory-ZTPI numa amostra de estudantes universitários portugueses. *Avances en Psicología Latinoamericana, 27*(1), 21–32.
- Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning*. Urbana, IL: University of Illinois Press.
- Peeters, G. (2001). In search for a social-behavioral approach-avoidance dimension associated with evaluative trait meanings. *Psychologica Belgica, 41*, 187–203.
- Rosenberg, S., & Sedlack, A. (1972). *Structural representations of implicit personality theory*. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6); (pp. 235–297). New-York: Academic Press.
- Seginer, R., & Halabi, H. (1991). Cross-cultural variations of adolescents' future orientation. *Journal of Cross-Cultural Psychology, 22*, 224–237.
- Sircova, A., Vijver, F. J. R., van de Osin, E., Milfont, T. L., Fieulaine, N., Kislali-Erginbilgic, A., et al. (2014). A global look at time a 24-country study of the equivalence of the Zimbardo Time Perspective Inventory. *SAGE Open, 4*(1). <http://dx.doi.org/10.1177/2158244013515686>.
- Strathman, A., Gleicher, F., Boninger, D. S., & Edwards, C. S. (1994). The consideration of future consequences: weighing immediate and distant outcomes of behavior. *Journal of Personality and Social Psychology, 66*(4), 742–752.
- Teahan, J. E. (1958). Future time perspective, optimism, and academic achievement. *The Journal of Abnormal and Social Psychology, 57*, 379–380.
- Teuscher, U., & Mitchell, S. H. (2011). Relation between time perspective and delay discounting: a literature review. *The Psychological Record, 61*, 613–632.
- Tryon, W. W., & Lewis, C. (2008). An inferential confidence interval method of establishing statistical equivalence that corrects Tryon's (2001) reduction factor. *Psychological Methods, 13*(3), 272–277. <http://dx.doi.org/10.1037/a0013158>.
- Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: the interpersonal domain. *Journal of Personality and Social Psychology, 37*, 395–412.
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: a valid, reliable individual-differences metric. *Journal of Personality and Social Psychology, 77*, 1271–1288. <http://dx.doi.org/10.1037/0022-3514.77.6.1271>.
- Zimbardo, P. G., & Boyd, J. N. (2008). *The time paradox: The new psychology of time that will change your life*. New York, NY: Free Press.
- Zimbardo, P. G., Keough, K. A., & Boyd, J. N. (1997). Present time perspective as a predictor of risky driving. *Personality and Individual Differences, 23*(6), 1007–1023.