

## **THE DUAL SELF: FIRST AND THIRD PERSON CATEGORISATIONS OF THE SELF AND THE ROLE OF OBJECTIVE SELF-AWARENESS**

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The classic duality of self-subject and self-object is related to the linguistic duality of self as a pronoun of the first and the third person. The latter duality is related to alternative ways of categorising people either as self versus other (SO categorisation) or as objects conceived in the third person (3P categorisation). Research is reviewed showing that these categorisations underlie personalised and depersonalised representations, respectively. Nevertheless, depersonalising 3P categorisation has been found more prominent in self-other comparisons than in comparisons between hypothetical others. In search for an explanation Duval and Wicklund's theory of subjective and objective self-awareness as well as causal attribution theory are discussed. In an experiment it is shown that conditions associated with objective self-awareness (e.g., presence of a mirror, instructions stimulating self-evaluation) increase 3P categorisation in self-other comparisons. The results add to our understanding of the role of objective self-awareness in self-other comparisons and in causal attributions from actors' and observers' perspectives.

At the core of any psychology of the self there is the concept of self. However, psychologists focus rarely on the concept of self as such. They rather they focus on more specific concepts such as self-concept (a person's view of him/herself), self-esteem (a person's evaluation of him/herself), real versus ideal self, and so forth. The various definitions and elaborations of these concepts involve the notion of self as a primitive term, indeed, but the question how to conceive of mere unpredicated selfhood is largely ignored. At best the reader is referred to philosophically oriented psychologists (James, 1890) and sociologists (Mead, 1934) who have stressed the dual nature of the self as a knowing subject that is the object of his/her own knowledge.

Although the duality of subject- and object-self has been advanced as an important aspect of the phenomenology of the self, it has not transpired in

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operationally defined concepts regarding (aspects of) the self. The self as subject may be central to the experience of conscious awareness, and the subject-object duality may make the self unique among social-cognitive structures, indeed, but the self psychologists talk about seems restricted to the self as object (Kihlstrom, Cantor, Albright, Chew, Klein, & Niedenthal, 1988). The reason for this restriction may be that psychologists want to avoid the paradox of the infinite regress one faces when reflecting on the self whereby the self-subject seems to recede every time one tries to grasp it. The solution of this paradox has been qualified as a philosophical problem beyond the scope of psychology (Russell, 1996). Nevertheless, Duval and Wicklund (1972) have attempted to integrate concepts of subjective and objective self into an encompassing theory of self-awareness that has proven most influential in psychological sciences. However, on closer examination, only the part of the theory dealing with the objective self accounts for the success of the theory. The subjective self is only marginally dealt with in a merely speculative manner. Moreover, Duval and Wicklund (1972) seem to have reconciled themselves to that imbalance when in the title of their book, they presented their theory as a theory of “objective” self-awareness.

In what follows, we attempt to get a grip on the subjective self by relating the psychological duality of subjective and objective self to another dual conception of the self – and of the person in general – that has been traced in the structure of language as well as of social cognition. Reviewing related psychological research, attention will be given to an apparently paradoxical observation referred to as the “self-effect”. It implies that self-directed attention involves representations of the self that seem less personalised (more like a physical object) than the representations formed of others. An explanation is proposed and tested connecting the language-based social-cognitive duality with Duval and Wicklund’s self-awareness theory and with causal attribution theory.

### Dual self in language and social cognition

Linguists have observed that the pronoun “self” can function as a personal pronoun for both the first and the third person (Lyons, 1977). For instance, hearing that “John nominated himself, and so did Bert”, a listener who interprets “self” as a pronoun of the first person would conclude that Bert also nominated himself. However, conceiving “self” as a pronoun of the third person, the listener would conclude that Bert nominated “him or her who is nominated by John”, that is, “John”.

Another linguistic observation is that the first and second persons are correlates: the first person “I” implies reference to the second person “you” and

vice versa (Benveniste, 1966). It follows that the concept of *self* “in the first person” implies reference to a concept of *other* as its correlate. Thus in the John-Bert example, the first person interpretation implies that John is categorised as *self* relative to Bert as *other*, and Bert is categorised as *self* relative to John as *other*. In this way, any individual can be categorised simultaneously as self and other. In previous studies, reviewed below, this way of categorising people has been referred to as the SO (Self-Other) categorisation (or cognitive SO Program, or SO mode of thinking, and so forth). Alternatively, perceivers who conceive *self* in the third person ignore the SO categorisation. Instead they categorise persons on the basis of distinctive features such as physical appearances (the tall and the small one), group memberships (the linguist and the psychologist), names (John and Bert), and so forth. Briefly, a person is conceived as a “he” or “she” marked by one or more features, and this way of categorising persons has been referred to as 3P categorisation (or cognitive 3P Program, or 3P mode of thinking, and so forth).

The SO/3P distinction can be implemented with concepts established by linguists and philosophers (Benveniste, 1966; Buber, 1923) who have associated the first and second person with the concept of person *as person*, and the third person with the concept of *non-person*. An individual is conceived as a non-person or impersonal object if the individual is merely dealt with as an *instrument* or an *object of knowledge* (Buber, 1923), which means that the individual is dealt with as a mere *set of features or processes* rather than as an autonomous being marked by freedom and dignity. In this respect, Skinner (1971) arguing for a psychology “beyond freedom and dignity” has in fact been promoting 3P-shaped theory. In sum, the point is that SO and 3P categorisations are like cognitive programs generating personalised and depersonalised discourses respectively (Peeters, 1989).

The above duality of personalised and depersonalised discourses can be highlighted by simple thought experiments. For instance, imagine the following situation. Perceivers notice that Bert lacks money to buy a concert ticket, but his ticket is paid for by John. Being asked what they think of John, perceivers who use SO categorisation may observe that John is generous because he spends money for another’s benefit and not for his own benefit. However, perceivers who use 3P categorisation would ignore whether the money is spent for one’s own or another’s benefit and so draw no inferences regarding personality traits such as generosity. Instead they may observe that John has enough money to pay for a concert ticket. This is a rather *impersonal* feature. In this respect it resembles physical features and contrasts with *personalised* properties, such as generosity, that mark the morally accountable person. Similar examples are suggestive, indeed, but conclusive evidence requires more systematic empirical research.

### Systematic research on SO and 3P categorisation

Systematic research has involved three research paradigms: the *relation-pattern model (RPM)*, the *imitation* paradigm, and the *psycholinguistic* paradigm.

*The Relation-Pattern Model (RPM)* was designed to study the formation of impressions of targets A and B on the basis of information about how A and B relate to each other and to themselves. It is akin to the above “ticket” example, and an elaborate account is available in this journal (Peeters, 2004; for succinct accounts, see: Peeters, 1983, 1987, 1991, 1992a, 1992b; Peeters & De Wit, 1995; Peeters & Hendrickx, 1998, 2002).

*The Imitation Paradigm* (Peeters, Grobбен, Hendrickx, Van Den Eede, & Verlinden, 2003) involves a series of imitation tasks designed to assess SO and 3P categorisation by children. For instance, a picture of the experimenter is displayed next to a picture of the child. The experimenter points to his/her own picture and asks the child to do the same. A child using SO categorisation points to his/her own picture and a child using 3P categorisation points to the experimenter’s.

*The Psycholinguistic Paradigm* (Hendrickx, 1997; Hendrickx & Peeters, 1997) involves the use of questionnaire items composed of statements made by two target persons as in the nomination example above, and in the Jan/Bert items presented in Table 1. In those items perceivers are asked to interpret the statement made by the second target (Bert) and to answer by marking one out of two alternatives (Bert or Jan). One alternative (Bert) reveals the use of SO categorisation, the other (Jan) 3P categorisation.

Empirical studies based on those paradigms showed, for instance, that perceivers used SO categorisation when processing information about attitudes and personality. Attempts to induce 3P categorisation were successful for information processing about attitudes but not for information processing about personality, which was explained in that a person’s personality belongs phenomenologically more to the core of the person “as person” than the person’s attitudes (Peeters, 1991). Further, 3P categorisation was found to underlie inferences about the chemical composition of medicines patients were taking, but inferences about the patients’ personalities were underlain by SO categorisation (Peeters & Hendrickx, 2002). In the same study it was found that thinking about religion as a doctrine involved 3P categorisation, and thinking about religion as a personal attitude to life involved SO categorisation. In another study, participants’ use of 3P categorisation in the execution of a task was increased by having the task framed in the context of the participants’ technical expertise (Peeters, 2004). Autistic children’s dealing with social situations was found more in agreement with 3P categorisation than non-autistic children’s (Hobson & Meyer, 2005; Peeters et al., 2003). As

Table 1.

Four items of the psycholinguistic paradigm with answer alternatives discriminating between SO and 3P categorisations.

	SO	3P
Imagine that Jan and Bert are colleagues		
(1) Jan thinks he has been living in the city for a longer time than his colleague. And so Bert thinks too (...) Who has been living in the city for the longer time according to Bert?		Bert Jan
(2) Jan thinks he is taller than Bert. And so Bert thinks too (...) Who is taller according to Bert?		Bert Jan
(3) Jan thinks he has more money than Bert. And so Bert thinks too (...) Who has more money according to Bert?		Bert Jan
(4) Jan thinks that Bert is more musical than he is. And so Bert thinks too (...) Who's more musical according to Bert?	Jan	Bert

*Note.* (...) indicates where, if necessary, additional instructions or questions could be inserted, for instance, to focus the participant's attention or to check whether the item is appropriately understood, e.g., "Give the name of Jan's colleague... Recapitulate the given information into a single sentence..."

to the items in Table 1, Hendrickx and Peeters (1997) predicted and found more 3P categorisation when any suggestion of a personal relationship was omitted from the items (Jan and Bert not presented as "colleagues"). However, SO categorisation was increased for items involving internal attributes instead of the external attributes used in Table 1. In this way, the item "Jan is more concerned with himself than with Bert, and so is Bert. Whom is Bert more concerned with?" elicited predominantly "Bert" responses (SO categorisation), while the item "Jan thinks he's taller than Bert, and so thinks Bert. Who is taller according to Bert?" elicited predominantly "Jan" responses (3P categorisation).

Altogether, research outcomes were in line with the hypothesis associating SO and 3P categorisation with personalised and depersonalised discourses respectively.

### A paradoxical self-effect

Another general finding across the above studies was that perceivers tended to process information about others in the SO way by default, particular-

ly if information about personality was processed. For instance, in a rule discovery task, participants had to find rules on the basis of which the experimenter called two people's personalities either "alike" or "different". Rules involving SO categorisation were readily discovered, e.g., the rule that people's personalities are called alike if the people have similar feelings towards some other (not necessarily the same) person. However participants failed to derive rules involving 3P categorisation, e.g., the rule that people's personalities are called alike if the people have similar feelings towards the same individual (Peeters, 1991).

Apparently humans are set for a personalised or animistic world view (Peeters, 1986). In spite of 3P-shaped alternatives from philosophy and science, the SO-anchored animistic view persists in the everyday metaphorical use of the personality domain to describe infra-human objects such as a friendly house, a shy little flower, a stubborn but honest wine, and so forth. In the same vein, several authors, including Michotte (1963), have pointed to animistic propensities in human dealing with causality and physical events (for a review, see White, 1990). Hence we were surprised to obtain more 3P categorisation when participants compared themselves with others than when they compared two others with each other. The requirement to process information about oneself always stimulated 3P categorisation (Hendrickx & Peeters, 1997; Peeters, 1992a; Peeters & Hendrickx, 1998). The only exception so far was obtained with the imitation paradigm. Data obtained from children aged 3-8 showed a tremendous and lasting breakthrough of SO categorisation at age five, but no evidence of 3P categorisation. However, adult participants who were subjected to the imitation paradigm showed the habitual increase of 3P categorisation (Peeters et al., 2003). In most of the cases 3P categorisation increased to a level in the neighbourhood of the level of SO categorisation. For instance, using psycholinguistic items such as the ones in Table 1, Hendrickx and Peeters (1997) obtained 24% 3P consistent (versus 76% SO consistent) responses. However, when participants were instructed to take the role of Bert (by having "you" substituted to "Bert"), 46% 3P consistent (versus 54% SO consistent) responses were obtained.

The latter findings suggest that perceivers form a more depersonalised representation of the self than of others. This "self-effect" fits in with previous findings showing that the self, more than others, is rather thought of as physically acting than as socially interacting (McGuire & McGuire, 1986). However, considering that the own self may be the "person" by excellence, it seems paradoxical that self-knowledge would be marked by depersonalisation.

An attempt to explain the self-effect by a hypothetical tendency to categorise self and other as members of different social categories proved invalid and an alternative explanation was suggested relating 3P categorisation to self-awareness (Peeters & Hendrickx, 1998). Considering that self-other

comparisons effectively involve self-awareness (Vorauer & Ross, 1999), one aim of the present study was to test the hypothesis that self-awareness contributes to the self-effect in self-other comparisons. This aim went hand in hand with a second aim, which was the elaboration of Duval and Wicklund's (1972) concepts of subjective and objective self in the light of the duality of SO and 3P categorisation.

### Subjective/objective self-awareness and SO/3P categorisation

As mentioned, Duval and Wicklund (1972) contrasted subjective self-awareness (henceforth: SSA) with objective self-awareness (henceforth: OSA). SSA was defined as an experience of "at-oneness" further specified as the feeling of being a causal agent that accompanies outward directed attention. OSA was defined as the experience of the self as an object in the world, and that experience is produced by inward directed attention.

SSA involves a concept of subjective self that resembles the present SO-anchored concept of person as an autonomous being in itself. Indeed, the *subjective self* is represented as a source of volitional acts, which means that the person is a primal causal agent that is not an effect of antecedent forces as is the objective self. The *objective self* is "*trapped by the forces of its environment*" (Duval & Wicklund, 1972, p. 34, italics added) as may be the 3P-anchored non-person. Hence an appealing idea may be that SSA and OSA involve cognitive information processing underlain by SO and 3P categorisation respectively. To check the validity of this idea, a closer examination of the SSA and OSA concepts is required.

SSA has been largely neglected in Duval and Wicklund's seminal monograph as well as in the related research literature on self-awareness. The reason may be that, as explained by Duval and Wicklund, SSA vanishes and turns into OSA as soon as it becomes a focus of attention. Nevertheless, the experience of causal agency that constitutes SSA can be an object of reflection if not the ongoing actions are at stake but the remembrances of actions that "*have become locked in the immutability of the past*" beyond the reach of the "*contemporaneous causal agent self*" (Duval & Wicklund, 1972, p. 34, italics added). Defining SSA as the remembrances of causal agency, Duval and Wicklund have introduced a concept of SSA that is to be distinguished from the elusive original concept of SSA as "at-oneness". It can be characterised as "fossilised SSA". Indeed, as cognition of the self it belongs to the realm of OSA like the fossil impression of an organism in a stone belongs to the stone. At the same time the fossil impression bears the marks of its origin. In this way SO categorisation may be advanced as a mark revealing the origin of cognitive contents that go back to SSA.

At this point the question arises what may be the SO shaped contents left as fossil traces of SSA. Duval and Wicklund defined the (fossilised) subjective self as causal agency. Elaborating the notion of causal agency leads to the correlative notion of effect. Hence contents of fossilised SSA may be described in terms of (possible or actual) effects of causal agency. The numbers of possible effects are legion. However, some fundamental effect categories can be derived from cognitive universals. So the universal good-bad contrast (Osgood, May, & Miron, 1975) suggests a distinction between good or beneficial effects and bad or detrimental effects. Another fundamental distinction is based on SO categorisation. It contrasts effects produced by a causal agent in the causal agent him/herself with effects produced in others beyond the causal agent. The combination of both distinctions defines four effect categories: good for self, bad for self, good for other, and bad for other.

As mentioned earlier, SO categorisation has been connected with the establishment of a personalised discourse involving a concept of person "as person" and a related personality concept as it has been conceived by personalistic philosophers such as Martin Buber. In this respect it is worthwhile that the above effect categories (good versus bad for self and other) have been found to define social perceptual dimensions (Peeters, 1983) that reflect dimensions of implicit personality theory in Western culture (Rosenberg & Sedlak, 1972) as well as universal social perceptual categories (White, 1982). For instance, "generosity" and "self-confidence" are SO related categories referring to causal agency with direct positive consequences for respectively others and the self (Peeters, 1983). It follows that the fossilised subjective self matches the SO shaped concept of person "as person" marked with a "personality" that fits the psychological concept of "implicit personality theory".

At the same time, the fossilised subjective self belongs to the objective self. As such it can be viewed as an object in the world. This has two consequences. First, the fossilised self can be representative of a whole class of similar perceived objects that are usually referred to as "persons". In this way perceivers can deal with others as causal agency selves conceived as SO shaped personalities. The second consequence is that, although fossilised SSA may have preserved an SO articulated structure as a hallmark of its subjective origin, it is amenable to be processed in the 3P way. In this way, it is not difficult to use 3P categorisation when dealing with personality traits whose semantics belong to the SO shaped discourse.

Altogether, both SO and 3P categorisation are available to perceivers to process information about oneself and others. However, as mentioned earlier, perceivers seem set for using SO rather than 3P categorisation by default. Nevertheless 3P categorisation is strongly activated when perceivers process information about themselves, particularly when they make self-other comparisons (self-effect). Mere conceptual elaboration of "causal agency self"



did not lead to an explanation. Hence in the following we build on established theory and research on “causal attribution”, particularly on the “actor-observer effect”.

### The role of causal attribution: the actor-observer effect

When making self-other comparisons, perceivers may readily take the perspective of an actor who is involved in a relationship with the other with whom he/she is comparing him/herself. Other-other comparisons then are made from the perspective of a distant uninvolved observer. Hence differential activation of SO and 3P categorisation in self-other and other-other comparisons may be what attribution theorists have called an actor-observer effect (Jones & Nisbett, 1972).

The classic actor-observer effect implies that observers tend to attribute an actor's behaviour to internal personal dispositions of the actor such as personality traits belonging to the personalised discourse shaped by SO categorisation. The actor, however, tends to attribute his/her behaviour to situational factors, which may reflect a rather depersonalised discourse shaped by 3P categorisation.

It could be objected that the nature of the differential attributions of actors and observers has been a subject of controversy. For instance, across a series of studies, reviewed by Knobe and Malle (2002), Malle and collaborators suggested a revision of the actor-observer effect. They argued that actors' and observers' explanations of behaviour differ in that actors focus on reasons, observers on causes such as stable traits. However, this revision does not detract from the suggested association of 3P categorisation with the actor's perspective and SO categorisation with the observer's perspective. The reasons advanced by the actor portray his behaviour in a rational light (Knobe & Malle, 2002), which might be achieved using an objectivistic 3P-anchored discourse like scientists or experts may use (Peeters, 2004). Observers would often lack information about actors' “reasons”, and therefore advance causes such as actors' correspondent personality traits that are processed by SO categorisation (Peeters & Hendrickx, 2002). Altogether it makes sense to explain the self-effect as an actor-observer effect. An important implication is that we may not need OSA to explain the self-effect, unless we would need OSA to explain the actor-observer effect. Hence in the following we discuss current explanations of the actor-observer effect. They have centred around two central themes: the availability of information and perspective taking.

### *Availability of information*

From Jones and Nisbett's (1972) seminal paper on, up to recent revisions (Knobe & Malle, 2002), differential availability of information to actor and observer has been a recurrent theme in explanations of actor-observer effects. The effect would be produced in that the actor has access to information that is not readily available to the observer. It may be information about the actor him/herself as well as about particular aspects of the situation. It is worthwhile that an analogous informational explanation has been advanced to explain why in some conditions default SO categorisation gives way for 3P categorisation (Peeters, 1983). Indeed, if only little information is available about an object, perceivers may miss information about specific features required to categorise the object in the 3P way. However the perceiver still can rely on the conceptual distinction between "self" and "other". Consistent with this rationale, SO categorisation was observed in perceivers who were required to draw inferences about indefinite tastes and preferences of indefinite target persons. However perceivers switched to 3P categorisation when the experimenter added information telling that the targets were musicians who were evaluating their own and each other's musical performances (Peeters, 1991, Experiment 1). Also the study mentioned earlier showing that experts use more 3P categorisation when dealing with their expertise argues for the role of information access. Similarly self-other comparisons may activate 3P categorisation because of the selective availability of particular information about the self that is not readily available about others.

The present informational explanation of 3P activation fits the above informational theory of the actor-observer effect. Hence the actor-observer effect, conceived as an informational effect, may explain the self-effect without requiring OSA as a necessary condition. Perceivers may use 3P categorisation in the processing of information about any person about whom 3P-stimulating information is given, regardless whether that person is the own self or not, and whether the 3P-stimulating information is obtained through OSA or not.

### *Mere perspective taking*

Jones and Nisbett (1972) went as far as to state that the actor-observer effect would even persist when actor and observer have the same information available. The mere difference in focus of attention would be sufficient. The observer would focus on the actor's behaviour and consequently on determinants within the actor. The actor's attention would not be focused on the self but "outward toward situational cues rather than inward on his own behaviour" (Jones & Nisbett, 1972, p. 88). Consistently Storms (1973) found

actors in agreement with observers making dispositional attributions of their own videotaped behaviour when the videotape was taken from the visual perspective of an observer. Frank and Gilovich (1989) obtained a similar effect in behavioural attributions made by actors on the basis of memories when the actors were instructed to shape their memories taking the perspective of an observer imagining themselves as seen from outside.

Adopting the same view, Duval and Wicklund (1972) considered that OSA effects may be explained as actor-observer effects by mere perspective taking. They suggested that OSA would induce an observer perspective making the perceiver observing him/herself as he would observe another person. However, considering that the self-effect occurs in self-other comparisons where participants have an actor perspective rather than an observer perspective, the suggested association of OSA with the observer perspective would not only detract from the role of OSA as a factor producing the self-effect. It even would reverse that role, OSA having to be considered as a factor reducing the self-effect. Indeed, if OSA in the self-other comparisons would induce an observer perspective, then the self-other comparison would become like the other-other comparison marked with personalising SO categorisation rather than objectifying 3P categorisation.

#### *Other attribution theories and conclusion*

The actor-observer effect represents only one province of causal attribution research. Connections of the present duality of SO and 3P categorisation with other causal attribution theories have been established in a previous study (Peeters & Hendrickx, 2002). For instance, correspondent inference theory (Jones & Davis, 1965) and related concepts such as correspondence bias and the fundamental attribution error (Ross, 1977) are shaped by SO categorisation, whereas the ANOVA model of attribution (Kelley, 1967) is shaped by 3P categorisation. Hence the question arises whether these connections can shed additional light on the present issue of differential SO and 3P categorisation in other-other and self-other comparisons. Examining that question profoundly however reaches beyond the scope of this article, all the more since there are strong indications that it would only confirm the present conclusions about the role of differential information access. For instance, lack of information of situational constraints has been advanced to explain correspondence bias (Gilbert & Malone, 1995) as well as the observer effect (Jones & Nisbett, 1972), both being related to SO categorisation. The application of the ANOVA model of attribution requires the availability of information about the consistency of events over time and situations (Kelley, 1967), which may be the sort of objectivistic situational information that stimulates actors to use 3P categorisation.

To conclude, research on causal attribution beyond the actor-observer paradigm seems to fit in well with the above paragraph on the role of the availability of information in the differential activation of SO and 3P categorisation. In this way it may add to the idea that the self-effect observed in self-other comparisons may be a simple informational actor effect independent of OSA. Also the mere perspective taking theory, according to which OSA induces perceivers to deal with themselves as with others, seems not to offer ground for explaining the self-effect as an OSA effect. Quite on the contrary it suggests that OSA should reduce the self-effect. Apparently the literature on causal attribution offers no support for the hypothesis that OSA may account for the self-effect.

### The role of self-evaluation

A majority of studies on affective concomitants of OSA, reviewed by Fejfar and Hoyle (2000) and Gibbons (1990), have associated OSA with negative affect that, from Duval and Wicklund (1972) on, has been advanced as evidence that OSA involves self-evaluation. Thereby "self-evaluation" has been conceived in a way requiring 3P categorisation. Specifically, OSA would elicit evaluation by automatic comparison of particular aspects of the self against particular standards in the same way as any object in the world may be evaluated (Silvia & Duval, 2001).

Since Duval and Wicklund (1972) OSA theory has stimulated a wealth of research and new developments reviewed by Duval and Silvia (2001), Gibbons, (1990), and Kihlstrom et al. (1988). For the present purposes it is only important to note that the connection of OSA with self-evaluation, and so with 3P categorisation, is still standing up as a basic fact. For instance, main theoretical developments have been dealing with the distinction between private and public forms of self-awareness (Fenigstein, Scheier, & Buss, 1975) and the adaptive self-regulatory function of OSA (Carver & Scheier, 1981). None of these developments has detracted from the self-evaluative function of OSA. An alternative theory of self-awareness denying the role of self-evaluation (Hull & Levy, 1979) could not stand the test of criticism (Gibbons, 1990). Thus one answer to the question why self-other comparisons involves depersonalising 3P categorisation may be that self-other comparisons involve self-evaluation that in turn involves objectification of the self. OSA would be involved, not only in that self-directed attention elicits self-evaluation, but also in that self-evaluation implies attention directed to the self.

## Summary and introduction to the experiment

The infinite regress of the self-subject cannot be undone. When we try to grasp the self-subject, it recedes and leaves us with a self-object. However the self-object is marked with traces of the receded self-subject referred to as fossilised SSA. The fossilised subjective self, described by Duval and Wicklund (1972) as the “causal agent self”, is shaped by SO categorisation, and it represents the personalised part of the self. Being part and parcel of the self-object, it can be processed also in the 3P way as are genuinely de-personalised parts of the self such as physical features. Systematic research revealed that when perceivers are dealing with others, they are inclined to focus on the SO shaped personalised part of the others’ self. However when perceivers direct their attention to the own self – e.g., by making self-other comparisons – also 3P categorisation tends to be used (self-effect). After an obvious explanation of the self-effect had failed to stand the test of empirical verification, it was speculated that it may be an effect of objective self-awareness (OSA). This speculation did not fit in well with an attribution-theoretical approach of the self-effect as an actor-observer effect, but it did well with a theory connecting OSA with self-evaluation.

In the following experiment three hypotheses were tested by comparing relative amounts of SO and 3P categorisation in self-other and other-other comparisons made by participants whose OSA was artificially manipulated.

First, the *self-effect hypothesis* concerned the presence of the basic phenomenon under investigation, which is the 3P enhancing effect of being involved as a target in an interpersonal comparison (self-effect). The hypothesis predicted that participants use more 3P categorisation in self-other comparisons than in other-other comparisons.

Second, the *OSA hypothesis* was the working hypothesis left from a previous study (Peeters & Hendrickx, 1998) advancing OSA as an obvious explanation of the self-effect to be tested. It predicted that enhanced OSA would involve enhanced 3P categorisation in self-other comparisons. In other-other comparisons, this OSA effect would be reduced, or absent because information about the self may have little or no impact on the comparison process if the self is not an object of comparison. Notice that in the light of the discussion of the self-effect as a possible actor-observer effect, confirmation of this hypothesis is far from evident. Stressing the role of differential availability of information in self-other and other-other comparisons allowed for an explanation without reference to OSA. Stressing the role of mere perspective taking led to the conclusion that OSA might reduce rather than increase the self-effect.

Finally, the *self-evaluation hypothesis* was derived from the idea that 3P categorisation in the self-other comparison may be due to objectification of

the self connected with self-evaluation. Considering that OSA involves self-evaluation, the hypothesis made the same prediction as the previous *OSA hypothesis*: increased OSA would involve increased 3P categorisation, at least in self-other comparisons. However, the hypothesis involved the following additional prediction that was derived from the nature of the evaluation process.

A target is evaluated by comparing it with a standard, and that standard can be another target. Hence there are two target roles: the target being evaluated that functions as the *subject* at stake in the comparison, and the target-standard that functions as the *referent* with which the subject is compared (Codol, 1987; Tversky, 1977). For instance, in the items in Table 1, participants are questioned about Bert. Hence Bert is the subject and Jan functions as the referent. If self-other comparisons involve self-evaluation, one expects the self being in the subject role and the other in the referent role. However, the degree of self-evaluation may be moderated by the way the comparison task is presented. Specifically the task cannot only be presented as a judgment about the self based on a comparison of the self as subject with another person as referent. Alternatively it can be presented as a judgment about another person based on a comparison of the other as subject with the self as referent. There is evidence that more self-evaluation is at stake when the self is taken as subject than when it is taken as referent. For instance, Hoorens (1995) has reviewed and obtained evidence that (a) self-evaluations are positively biased, and (b) the self is more positively evaluated when taken as subject of a comparison than when taken as referent. Both findings taken together suggest that more evaluation of the self is going on when the self is taken as subject than when it is taken as referent. Moreover, Pahl and Eiser (2006) have obtained evidence suggesting that this evaluative difference between the self-subject and the self-referent is mediated by OSA. Hence the *self-evaluation hypothesis* predicted that in self-other comparisons more 3P categorisation is elicited when the self is taken as the subject of the comparison than when it is taken as the referent.

## Method

### *Participants*

Participants were 96 Dutch-speaking first-year psychology students (76 females) at the K.U.Leuven participating in individual sessions as an optional part of their study program. They were evenly and randomly distributed across six conditions obtained by crossing two self awareness (OSA) conditions with three target role conditions as described below.

### *The induction of OSA*

In principle any device that would direct the participant's attention to the self would be suited to induce OSA. In the majority of past studies the experimenter used a mirror, which would induce private self-awareness. Another method exposed the participant to a record of his or her own voice, which would induce public self-awareness. As the distinction between private and public self-awareness was not at stake, and we wanted that the OSA induction would be effective, both private and public self-awareness were manipulated simultaneously by having the presence (versus absence) of a mirror combined with exposure to a record of one's own (versus a stranger's) voice.

Previous studies, as well as the present authors' own pilot testing<sup>1</sup>, suggested that (a) private self-awareness manipulations, such as the mirror manipulation, are more effective than public self-awareness manipulations, such as the voice manipulation (Eichstaedt & Silvia, 2003), and (b) the prominent effect of the mirror grows in time (Carver, 1974), while the already weaker effect of one's own voice recording diminishes in time (Ickes, Wicklund, & Ferris, 1973). The mirror manipulation being more effective than the voice manipulation, it was decided to create optimal conditions for the mirror's effect by having the OSA induction started some time before the data were gathered by an experimental questionnaire. For that purpose a filler task was intercalated. It consisted of 10 items from the Self Focus Sentence Completion Test of Exner (1973) that were expected to facilitate self-directed attention – e.g., “I think that...”.

### *Experimental questionnaire and target role conditions*

The experimental questionnaire is presented in Table 1. However it varied across three *target role conditions* as follows.

#### Control condition

This is the condition presented in Table 1.

#### Referent condition

This condition differed from the *control* condition in that “you” was substituted for “Jan”. Thus the introduction and item 1 were adjusted as follows:

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<sup>1</sup>Actually the pilot testing – of which a report can be obtained from the first author – involved an extensive study that was included in a previous draft of this article. Because of the use of the RPM paradigm, the study was very complex. The outcomes added to the present study's ecological validity, however, without contributing new elements to our understanding. Hence feedback from reviewers and the editor convinced us to have it removed and substituted with a more elaborate presentation of theoretical backgrounds and related research.

*“Imagine that you and Bert are colleagues. You think you have been living in the city for a longer time than your colleague. And so Bert thinks too. Who has been living in the city for a longer time according to Bert? YOU BERT”.*

### Subject condition

This condition differed from the *control* condition in that “you” was substituted for “Bert”. Thus the introduction and item 1 were adjusted as follows: *“Imagine that Jan and you are colleagues. Jan thinks he has been living in the city for a longer time than his colleague. And so you think too. Who has been living in the city for a longer time according to you? JAN YOU”.*

### Answering procedure

Participants marked in each item one out of the two response alternatives one of which was consistent with SO categorisation, the other with 3P categorisation, as indicated in Table 1.

### Procedure

The experimenter first explained that the study dealt with effects of background stimuli on thought processes in “intellectual tasks”. The participant was invited to read a text (a newspaper article on financial problems of a radio station). In the *high OSA* condition, the participant read the text aloud and was informed that a recording was made to be used as a background stimulus. In the *low OSA condition*, the participant was asked to read the text silently and the experimenter explained that a recording of the same text spoken by an anonymous speaker was going to be used as a background stimulus.

Then the participant sat down at a table to start the “intellectual Tasks”. On the table there was a writing-pad (30 by 60 cm.), which the experimenter explained that this was a visual background stimulus. In the *high OSA* condition, the writing-pad was a mirror, whereas in the *low OSA* condition it was a poster. The first task was a crossword puzzle intended to familiarise the participant with the situation. The experimenter warned that the puzzle task would be interrupted before it could be finished. After three minutes, the experimenter asked the participant to stop working on the puzzle and to proceed to a “sentence completion task” being the above-mentioned filler task added to have the OSA induction prolonged without reducing self-directed attention. Finally the experimenter presented a “reasoning task”, which was the experimental questionnaire that yielded the data. While performing the tasks, participants were exposed to records of either their own voice in the *high OSA* condition, or an anonymous speaker’s voice in the *low OSA* condition. Finally participants were thanked and debriefed.



## Results

For each participant an SO/3P score was computed – actually the proportion of SO consistent answers out of the total number of (SO and 3P consistent) answers across the four items. Scores higher (versus lower) than .50 indicate that more (versus less) responses are consistent with SO categorisation than with 3P categorisation. The results are presented in Table 2.

Table 2.  
Means (SDs) of SO/3P scores.

	Target Role Conditions		
	Control	Referent	Subject
Self-Awareness			
High OSA	.76 (.40)	.22 (.40)	.17 (.28)
Low OSA	.68 (.44)	.60 (.44)	.10 (.28)
Total	.72 (.42)	.41 (.45)	.13 (.28)

Note. Remember that lower values indicate higher prominence of 3P categorisation.

A 2(Self Awareness: high OSA, low OSA) X 3(Target Role: control, referent, subject) ANOVA yielded a significant main effect of *Target role*  $F(2, 87) = 18.65, p < .0001$ . In addition, a Bonferroni-test yielded significant results ( $ps < .05$ ) on all paired comparisons of the *target role* conditions. Thus, less SO (more 3P) categorisation was obtained in the *subject* condition than in the *referent* condition, and in both conditions there was less so than in the *control* condition. However, the main effect was qualified by an interaction with OSA  $F(2, 87) = 3.69, p < .03$ . High OSA affected neither the dominant SO categorisation in the *control* condition (where participants did not take the role of a target) nor the dominant 3P categorisation in the *subject* condition (where participants took the role of subject of comparison). Only in the *referent* condition, where participants took the role of referent, manipulated OSA produced a significant effect  $F(1, 87) = 7.82, p < .007$ .

## Discussion

The *self-effect hypothesis* was confirmed by the significant *target role* effects. 3P categorisation was clearly more prominent when participants' attention was focused on the self by making self-other comparisons (*referent* and *subject* conditions) than when participants made comparisons between two others (*control* condition). Thus the self-effect observed in previous

studies (Hendrickx & Peeters, 1997; Peeters, 1992a; Peeters & Hendrickx, 1998) was replicated. This result adds to the ecological validity of the effect, most of the previous studies involving a completely different setting based on the RPM paradigm described in the introduction. Nevertheless, the validity of the hypothesis seems qualified by an interaction between *Target Role* and *Self-Awareness*. It suggests that the self-effect requires a rather high amount of self-directed attention that could be produced either by inducing artificial OSA, or by taking the self as the subject rather than as the referent of a self-other comparison.

The *self-evaluation hypothesis* stated that 3P categorisation in self-other comparisons would be elicited by taking the self rather than the other as the subject being evaluated. Consistently more 3P categorisation was obtained in the *subject* condition than in the *referent* condition. However, also this effect was qualified by the interaction of *Target Role* with *Self-Awareness*, the effect being by far most prominent (.60 vs. .10) when OSA was assumed to be low. When OSA was assumed to be high because of the presence of a mirror and other OSA inducing manipulations, the effect was reduced and not significant (.22 vs. .17).

The *OSA hypothesis* stated that 3P categorisation in self-other comparisons would be elicited by OSA, irrespective of whether the self was taken as subject or as referent. As expected, the contrast between the *control* condition and the joint *referent* and *subject* conditions is more prominent when OSA is high (.76 vs. .20) than when OSA is low (.68 vs. .35). However, once more the interaction between *Target Role* and *Self-Awareness* is the fly in the honey: the 3P enhancing effect of OSA is limited to the condition with the self as *referent*.

Altogether, the obtained interaction is most parsimoniously explained as a joint effect of the forces assumed by the *self-evaluation* and *OSA* hypotheses. Focusing attention on the self as the subject of a self-other comparison may suffice to raise OSA and 3P categorisation to a ceiling that is not exceeded when additional stimulation of OSA is provided. However, when in the self-other comparison attention is directed to the other as the subject, the self being the referent, then there would be room for more 3P categorisation activated by additional, artificially induced, OSA.

The main aim of the experiment was to check whether OSA could account for the self-effect. It can be concluded that OSA effectively does so. The question remains by which processes OSA may produce the self-effect. In the introduction, processes were looked for in the attribution literature. Although the present outcomes may not be conclusive about processes, they shed light on possible processes and on related theory and research concerning OSA, actor-observer effects, and perspective taking.

*Self-effect and actor-observer effect: the informational explanation*

Approaching the self-effect as an actor-observer effect, it was suggested that self-other comparisons are made from an actor's perspective and other-other comparisons from an observer's perspective. The self-effect then may be due to 3P-stimulating information that would be selectively available to the actor and it may not necessarily require OSA. If the self-effect is a mere informational effect, then the self-effect should persist in conditions where OSA is low or absent. A similar condition may be the low OSA condition with the self as referent. Table 2 shows that the SO/3P score (.60) is lower than in the control condition (.68), which is in line with the informational explanation. However the difference is not significant and it can be accounted for as well by the minimal OSA involved in any self-other comparison.

Advocates of the informational explanation may downplay the role of OSA arguing that OSA can be as high in the *referent* as in the *subject* condition but the 3P-stimulating information available may only be salient in the *subject* condition. The impressive dominance of 3P categorisation in the condition with the self as subject then is an informational effect rather than an OSA effect. However, the genuine role of OSA cannot be ignored when it comes to explaining the strong effect of artificially induced OSA on 3P categorisation when the self is taken as referent. Altogether, OSA provides the most parsimonious explanation of the obtained self-effects, though it is not excluded that also informational processes can produce self-effects.

*OSA and actor-observer perspective taking*

The conclusion that OSA cannot be ignored as a factor producing the self-effect complicates possible explanations of the self-effect as an actor-observer effect. It clashes specifically with the assumption that self-other comparisons are made from an actor's perspective. Indeed, from Duval and Wicklund (1972) on, OSA has not been associated with an actor perspective but with an observer perspective. When a perceiver makes a self-other comparison, OSA would make him/her looking at him/herself as an observer may look at another person. However, as it has been explained earlier, the perceiver in that case should use SO categorisation rather than 3P categorisation, which would be inconsistent with the obtained self-effects. Hence the question arises how we can reconcile the obvious assumption that self-other comparisons involve an actor perspective with the assumption that the OSA that produces self-effects in self-other comparisons involves an observer perspective.

In search for an answer, we start examining what authors had in mind when associating OSA with an observer perspective. Duval and Wicklund

(1972) argued that an actor's attention is directed outward to the environment rather than inward to the self. Thus when the actor's attention turns to the self, the actor becomes an observer albeit a "self observer". Thereby they considered that the "self observer" differs from the "observer of another" in that "actor and observer are one" (Duval & Wicklund, 1972, p. 206). However, this consideration gave no cause for abandoning the one-sided conception of the objectively self-aware person as an observer rather than as an actor. The question is: Why?

One obvious reason why the objectively self-aware person has been conceived as an observer was that OSA is induced using reflecting devices such as mirrors that enable to observe oneself as one might observe another person. However, "observing oneself in the mirror as another person" is not viewed as forming a personalised SO shaped impression. Quite the contrary, Morin (1998, 2004) suggests that experiences with self-reflecting devices contribute to the development of imagery about the self as a physical object, and that imagery would even be a necessary condition for OSA. At a first glance, this theory is consistent with the idea that OSA involves depersonalised 3P-shaped objectification. However Morin also assumes that more abstract psychological aspects of the self, such as personality traits involving SO categorisation, are ignored or at least consigned to the background. This assumption is not only inconsistent with the default character of personalising SO categorisation in observers' social-perceptual information processing; it also ignores decades of social-perceptual research showing that perceivers form full-fledged personalised impressions of others' psychological characteristics on the basis of superficial physical cues such as posture, skin colour, facial appearance, attire, and so forth (e.g., Pennington, 2000).

A way out of this deadlock may be found if we consider that perceivers form representations of their own psychological features on the basis of introspection rather than on the basis of the external physical cues they use as windows on the inner life of others. It follows that physical information provided by reflecting tools about oneself may not be used to fathom one's own inner life but it may just be taken for what it is: information about external physical features. In this way the mirror image may make the perceiver aware of his/her status of object in the world. This awareness may elicit an objectifying attitude to the self that may not be confined to the physical self; it may generalise to the whole self, including internal psychological aspects. Thus the objectifying effect of OSA would be produced by handling the inner self in the same way as an external physical image of the self that is produced by devices or imagery providing a view on oneself from the perspective of an external other.

The latter "perspective of the external other" differs from the classic "observer perspective" in that the classic "observer perspective" does not

involve the clash between direct introspection and physical cues as sources of information about inner life. If a self observer would take the classic observer perspective, then he/she would look at him/herself as at another person ignoring direct introspective experience of inner life and deriving inner life from external physical cues. Note that a similar perspective may have occurred in studies such as Storms' (1973) where participants were confronted with their videotaped past behaviour after direct introspective experience of that behaviour was over.

### *The classic actor-observer effect as a self-effect*

The previous sections suggest that there is no ground for explaining the self-effect as a classic actor-observer effect. However, considering the role of OSA, the classic actor-observer effect may be explained as a self-effect. The self-effect may follow from OSA that is produced by taking the actor's perspective. At a first glance this explanation is at odds with the assumption that the actor's perspective involves no OSA because the actor's attention is directed outward to the environment rather than inward to the self (Jones & Nisbett, 1972). This may be so as long as the action is going on, indeed, but the actor's attention may turn to the self and produce a self-effect as soon as the actor is requested to describe or explain his/her behaviour. In that way the actor may adopt an inward-directed orientation involving OSA and self-evaluation that may stimulate 3P categorisation that in turn may facilitate attributions to impersonal situational causes.

At a first glance this explanation of the actor-observer effect as a self-effect in the actor mediated by OSA seems inconsistent with effects of OSA on egocentric versus allocentric perspective taking (e.g., Abbate, Isgro, Wicklund, & Boca, 2006; Hass, 1984; Stephenson & Wicklund, 1983). Specifically, OSA would reduce egocentrism and make participants taking into account others' perspectives. Generalising to the actor-observer paradigm, this could mean that OSA makes an actor switching to an observer perspective. However, this would imply that the actor switches from 3P categorisation to SO categorisation, which is in contradiction with the assumed self-effect in the actor.

A possible solution to the contradiction may be provided in that in the studies on egocentric and allocentric perspective taking, the "perspective of the other" is not that of an uninvolved observer but that of another, possibly hypothetical, actor who is involved in the same task situation as the participant. An actor taking the other's perspective then means only that the actor's egocentrism is reduced in his/her understanding of the other actor's role. For instance, Abbate et al. (2006) asked Italian participants to choose between a postcard written in Italian and one written in English to be sent to an English

addressee. Twice as many participants selected the card written in Italian compared to the one written in English. However this proportion was reversed in a condition where OSA was activated by the presence of a mirror. Apparently OSA made participants aware of the complementary roles of sender and receiver and related requirements to maximise chances of successful message transmission. In contrast with what has been observed for personality concepts such as “generous” or “self-confident”, role concepts involve no differential relationships with self and other but relationships with complementary roles as between components of a machine. For instance the sender role implies a reference to the complementary receiver role, but no references to “self” or “other”. In this respect, role concepts are typical 3P concepts. So it was familiarity with role requirements of musical performers that, in a previous study, enabled musicians to use 3P categorisation when processing information about singers and their accompanists (Peeters, 2004).

Apparently OSA makes an actor switch from an egocentric to an allocentric perspective, but that switch cannot be reduced to a switch between the classic actor and observer perspectives. Rather the “allocentric perspective” may resemble the specific sort of “perspective of the other” that earlier in this section was related to 3P categorisation. Hence OSA may indeed stimulate allocentric perspective taking and related 3P categorisation, but this need not to imply that OSA involves the classic observer perspective marked by SO categorisation.

### *Questioning the role of self-evaluation*

In the light of the evidence available, a most parsimonious explanation of the self-effect in self-other comparisons relates the effect to OSA connected with self-evaluation. The role of self-evaluation was supported by the confirmation of the *self-evaluation hypothesis* showing that 3P categorisation was stimulated by taking the self as a subject rather than as a referent in the self-other comparison. However, the generality of that subject/referent effect seems challenged by the results of a previous study (Peeters, 1992a). The study was not based on the present psycholinguistic paradigm but on the RPM paradigm mentioned earlier and the procedure required participants to provide self-other (dis)similarity ratings. For the sake of ecological validity, rating instructions were varied across two presumably equivalent formulations. Half of the participants were asked to rate self-other “similarity” (e.g., “How similar are you to the other/is the other to you”), and the other half were asked to rate self-other “difference” (e.g., “How different are you from the other/is the other from you”). Overall there was no significant subject/referent effect. However, separate analyses of similarity and difference ratings suggested that, in comparison with the “difference ratings”, the “similarity”

ratings were more in agreement with the present outcomes showing the self-effect. Participants who were asked to rate how “similar” they were to the other, tended to use more 3P categorisation than participants who were asked to rate how “similar” the other was to them, and this tendency was reversed when “how similar... to” was replaced with “how different... from”.

A possible explanation may proceed from the observation that similarity ratings, rather than difference ratings, focus the participants’ attention on what they have in common with the other (Tversky, 1977). Also the present psycholinguistic paradigm requires participants to focus on something (an idea, feeling, etc.) the self shares with the other. It is feasible that the tendency to have more 3P categorisation in self-other comparisons when the self is taken as subject rather than when it is taken as referent, holds only for comparisons focusing on common rather than on distinctive features. Hence the question arises why focusing on self-other similarity would stimulate 3P categorisation. One answer could be that OSA is enhanced more by directing one’s attention to features one shares with others than to features by which one differs from others. However, the validity of that answer has been challenged by Pahl and Eiser (2006) who could not obtain evidence that rating self-other similarity would involve more OSA than rating self-other difference.

Another explanation may be looked for in terms of the well-established distinctiveness principle in identity processes (for a review, see Vignoles, Chrysoschoou, & Braekwell, 2000). Humans affirm their identity by differentiating themselves from others. Hence focusing on common features may be experienced as threatening the own identity. It is feasible that in order to protect the own identity 3P categorisation is elicited directly by focusing on rather impersonal aspects of the self such as particular physical features that can be shared with others without fearing identity loss. According to this explanation, the self-effect would be a matter of self-affirmation rather than of self-evaluation. One could observe, of course, that there may be no self-affirmation without self-evaluation, and vice versa. The two explanations may assume different processes, indeed, but those processes are probably not incompatible and future research should determine to which extent either process may contribute to the self-effect.

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