THINKING IN THE THIRD PERSON:
A MARK OF EXPERTNESS?

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The observation that publication manuals disagree about the desirability to use the third person is explained by arguing that the third person detracts from communication at the surface structural level of linguistic encoding but adds to experts' thinking at the deep structural level of cognitive organization. At the deep level, the third person is defined in terms of processing information defined over relations between entities with the restriction that it is ignored whether relations are reflexive (with self) or non-reflexive (with others). Research is reviewed suggesting that reflexivity is not ignored by default, and that ignoring it facilitates a kind of "depersonalized" thinking reminiscent of the natural sciences and expertness. An experiment is reported confirming that perceivers tend to draw inferences that take reflexivity into account, except in a condition where stimulus information is related to the perceivers' expertise. In the latter, condition inferences are drawn in both ways: either ignoring or not ignoring reflexivity.

There has been a strong tradition in scientific writing to avoid the first person and to use the third person instead. Referring to him/herself, an author may not write "I did…" but "The experimenter did…". Consistently, the 1957 edition of the "Publication Manual" of the APA (American Psychological Association) urged to write in the third person because it would contribute "to gain objectivity" (o.c., p. 16). However, in the 1974 edition the sustained use of the third person was laughed off as "scientificese" that detracted from readability without adding to objectivity (o.c., p.28).

At a first glance, one may be inclined to relate this remarkable reversal to a general change in mentality that manifested itself also in the students' revolt of 1968 and the flower power movement. If such would be the case, the third person might have been just a flag marking the distinguished academic status of the author. The spirit of the age may have been involved, indeed, but this does not yet mean that the authors of the APA manuals were weathercocks whose arguments won't wash. Both editions may have a point if the following distinctions are taken into account.

The first distinction sets communication against thinking as different functions of language. It is conceivable that persevering use of the third person detracts from communicability but adds to the quality of thinking. For instance, Adda (1982) observed that in order to optimize communication, mathematics teachers resorted to an informal style. Mathematical exercises were personalized by asking the children to compute, for instance, the number of marbles they had. However, when thinking aloud and explaining the problem, children used a more formal style involving reference to the self in the third person. In this way, young Maryse did not say: "I have X marbles", but: "Maryse has…" Apparently, the use of the third person helped her to solve the problem. The contradictory instructions in the 1957 and 1974 APA publication manuals then may be explained in that the former focused on the quality of thinking, the latter on the quality of communication.

At a first glance, the latter conclusion may suggest that in the 1974 edition the quality of thinking was no longer considered important. This is not so in the light of another distinction that was of the order of the day in the sixties. Since Chomsky (1965) stressed the distinction between surface and deep structure levels, it has been widely acknowledged that there is no simple one-to-one relationship between the level of linguistic code and the underlying level of "meaning" or cognitive content. A sender can encode the same message content using a variety of alternative formulations at the surface level, and an encoded message can be decoded in a variety of ways reflecting, for instance, receivers' knowledge of the world, their wishes and expectations. Hence efficient processing of information on the deep level may not simply mirror efficient processing on the surface level. In agreement with the 1974 manual, the use of the first and second person rather than the third person may facilitate communication on the surface level. However, in agreement with the 1957 manual, the use of the third person may be required for optimal information processing on the thought-oriented "deep level".

Surface and deep levels being subjected to different constraints, it may not surprise to find processing on the deep level out of line with the surface level. For instance, if I claim extra money from the faculty resources, my colleagues may react by blaming my greed. However, they may not do so if they transform my first-person request into a third-person statement such as: "The Social Psychology Unit needs more money", whereupon they may ask for an objective inventory of the unit's needs. Conversely, if I would argue in the third person saying that the Social Psychology Unit needs more money, some colleagues may readily reintroduce the first person and blame my greed because I am claiming money "for myself."

At this point the question arises what is meant by deep level processing of information "in the third person". On the surface level the third person is operationally defined by linguistic codes such as pronouns (he, she), sub-

stantives (Maryse), and verb inflections (has). However, which common denominator can be designated on the deep level? A similar common denominator, and its operational definition, has been provided by the Relation-Pattern Model, henceforth abbreviated RPM. The basic principles and partial elaborations of the RPM have been presented in previous studies (Peeters, 1983, 1987, 1991, 1992a, 1992b; Peeters & De Wit, 1995; Peeters & Hendrickx, 1998, 2002). The aim of the present study is to check whether experts' thinking is marked by the use of the third person as it has been operationally defined by the RPM. Therefore we should first have a close look at the RPM.

The Relation-Pattern Model (RPM)

Consider the following problem: "Mary votes for herself and John votes like Mary. Whom is John voting for?" Linguists have observed that the answer depends on whether on the deep-structural level "self" is conceived of in the first or in the third person (Harré, 1985; Lyons, 1977). Hence similar problems can be used to detect whether a subject thinks on the deep level in the third person. If the subject answers that John votes for Mary, it means that "self" was conceived of in the third person, while applying the first person the subject would have derived that John votes for himself.

In the area of person perception, a similar duality has been traced in the ways perceivers draw inferences from interpersonal relations (Peeters, 1967, 1983). For instance: if Ann is satisfied with Bill and Bill is satisfied with himself, one can infer that Ann and Bill are similar both being satisfied with the same individual "Bill" (third person). However, this is not the conclusion a perceiver would draw if he/she would consider that Ann is satisfied with an "other" while Bill is satisfied with his own "self". In that case, Ann and Bill may be perceived as different, which may manifest itself by Ann appearing more social and less conceited than Bill. In the linguist's terms, Ann and Bill are perceived as similar in liking the same person if "self" is conceived in the third person. They are perceived as different if "self" is conceived in the first person, and, following on from that, "other" is conceived in the second person.

The RPM has been designed to unravel similar dualities in social perception and cognition (Peeters, 1983). Tying up with the literature of the day on cognitive universals (Bever, 1970; Greenberg, 1966), perceived situations, as the ones in the above examples, were formalized in terms of entities (e.g., Ann and Bill) and relations between entities (e.g., be satisfied with). In principle any transitive verb or verb phrase could designate a relation. However, the RPM considers only two relation variants at a time. They are referred to as the positive and the negative relation, and can be implemented with any

pair of psychological opposites such as like/dislike, approach/avoid, be satisfied/dissatisfied with, etc.

Until now, most of the research based on the RPM has dealt with the perception of relatively simple social situations composed of a minimal set of two entities (A and B) and four (positive and/or negative) relations. Sixteen sets have been considered, which are the "relational patterns" presented in the upper panel of Table 1. Each of the columns a, b,.. p, represents a relational pattern in which P and N represent respectively positive and negative relations. Each relation can be conceived as a vector (or arrow) directed from an origin (the arrow shaft) to a terminal (the arrowhead). A relation from A (origin) to B (terminal) is referred to as the relation AB where A is the "origin entity" and B the "terminal entity". AA and BB represent reflexive relations, which means that a single entity functions as origin and terminal enti-

Table 1. *Relation-Pattern Model (RPM) for Relational and Informational Patterns a, b, c, ... p*

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
RELATIONAL PATTERNS																
Relation AB:	P	P	P	P	P	P	P	P	N	N	N	N	N	N	N	N
Relation BA:	P	P	P	P	N	N	N	N	P	P	P	P	N	N	N	N
Relation AA:	P	P	N	N	P	P	N	N	P	P	N	N	P	P	N	N
Relation BB:	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N
INFORMATIONAL PATTERNS																
BY DIRECT ASSOCIATION																
1. with relation AB:	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-
2. with relation BA:	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-
3. with relation AA:	+	+	-	-	+	+	-	-	+	+	-	-	+	+	-	-
4. with relation BB:	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
BY BASIC RPM																
SO program																
5. (1.2) O-part	+	+	+	+	-	-	-	-	-	-	-	-	+	+	+	+
6. (3.4) S-part	+	-	-	+	+	-	-	+	+	-	-	+	+	-	-	+
3P program																
Terminal part																
7. (1.3) A=origin	+	+	-	-	+	+	-	-	-	-	+	+	-	-	+	+
8. (2.4) B=origin	+	-	+	-	-	+	-	+	+	-	+	-	+	-	-	+
Origin part																
9. (2.3) A=terminal	+	+	-	-	-	-	+	+	+	+	-	-	-	-	+	+
10. (1.4) B=terminal	+	-	+	-	+	-	+	-	-	+	-	+	-	+	-	+
BY COMPLEX INTERACTION																
11. (1.2.3)	+	+	-	-	-	-	+	+	-	-	+	+	+	+	-	-
12. (1.2.4)	+	-	+	-	-	+	-	+	-	+	-	+	+	-	+	-
13. (1.3.4)	+	-	-	+	+	-	-	+	-	+	+	-	-	+	+	-
14. (2.3.4.)	+	-	-	+	-	+	+	-	+	-	-	+	-	+	+	-
15. (1.2.3.4.)	+	-	-	+	-	+	+	-	-	+	+	-	+	-	-	+

ty for the same relation. Taking satisfaction and dissatisfaction as positive, respectively negative, relation variants, the relational pattern "a" represents a situation where A and B are satisfied with each other and with themselves as well. Pattern "d" (negative reflexive and positive non-reflexive relations) may represent a situation where A and B are satisfied with each other but not with themselves.

From Relational Pattern to Informational Pattern

One basic idea behind the RPM is that each "relational pattern" implies an "informational pattern" being a set of similarities and dissimilarities between A and B some of which may get through to the impressions perceivers form of A and B. In Table 1, + and - signs stand for +1 and -1 representing respectively high and low similarity (or low and high dissimilarity). The informational patterns involve 15 rows of +/- signs. These rows define ways in which similarity can be implied by the relational patterns. This does not mean that perceivers would have 15 inference rules at their disposal. The informational patterns are purely formal. They were designed in a way as to have rows 1-15 mutually uncorrelated while covering 100% of the variance of the degrees of similarity (versus dissimilarity) a perceiver may assign to A and B across the 16 relational patterns. Hence any specific inference rule used by a perceiver may reveal itself in a specific configuration of correlations of inferred similarities with rows of the RPM. For instance, a perceiver may consider that "Birds of one feather flock together" and use an inference rule associating similarity with positive interpersonal feelings such as satisfaction. If P and N represent respectively high and low satisfaction, perceived similarity would be maximal for the relational patterns a, b, c, d, minimal for m, n, o, p, and intermediary for the remaining patterns. Similarity ratings obtained from the perceiver would reveal the perceiver's inference rule by showing high positive correlations with rows 1 and 2. For instance, the perceiver may produce a configuration of correlations as represented in Table 2, column F2. Note that the lower positive correlations with rows 3 and 4 may be due to chance. However, if they would be reliable, they could indicate that the perceiver uses an additional inference rule based on the assumption that A and B wish to be alike: the more they are alike, the more they are satisfied with themselves.

Inference rules involving direct association of similarity with particular relations are bound to specific relational contents and cannot be generalized to any possible relation. For instance, a rule associating similarity with satisfaction applies only to relational patterns implemented with satisfaction and/or dissatisfaction. However they would not apply if relations are imple-

mented with verbs such as smelling (versus not smelling), touching (versus not touching), stimulating (versus not stimulating), be (versus not be) aware of, etc. The RPM was initially designed to establish unconditional inference rules that could be applied to any possible relational input. Hence a second basic idea behind the RPM was that, in agreement with Occam's razor, assumptions regarding inference rules should be reduced to a minimum. Consistently, the RPM was basically designed to map informational patterns that could be defined as tautological reformulations of the relational patterns. However, it turned out that even tautological reformulations can assume different forms falling apart in two categories depending on whether the entities A and B are conceived either "as self versus other" or "in the third person". This duality has been described as two "modes of thinking" or "cognitive programs" referred to as the "self-other– or SO–program" and the "third person– or 3P–program". SO and 3P programs transform relational "input" patterns into informational "output" patterns of AB (dis)similarities just by handling relations as attributes of A and B. For instance, the relational input "A likes him/herself" involves attributes of A such as: liking A, being liked by A, liking oneself, being liked by oneself. The resulting similarities are presented in Table 1, panel: "informational patterns", subpanel: "by basic RPM".

The SO Program

Similarities belonging to the SO program are displayed in rows 5 and 6.

Row 5 represents the O (Other-related) part of the SO program, which means: A and B represented as similar if both relate in the same way to the other person, e.g.: either both satisfied or both dissatisfied with the other. In an analogous way row 6 represents the S (Self-related) part of the SO program, which means: A and B represented as similar if they relate in the same way to the self, e.g.: either both satisfied or both dissatisfied with the own self. For instance, as for the relational pattern c (A and B satisfied with each other but only B satisfied with him/herself), the "plus" sign in row 5 indicates that A and B have similar feelings with respect to at least one other person, whereby it does not matter that the other A is dealing with is not the same person as the other B is dealing with. The "minus" sign in row 6 indicates that A and B feel differently with respect to the own self.

An early, initially unexpected, research outcome was that perceivers switch readily between the S and O parts of the SO program, without mixing up with the 3P program (Peeters, 1983; 1991). As a consequence perceivers often yield correlation patterns resembling column F1 in Table 2. The pattern indicates that A and B are perceived as similar to the extent that they meet two equally weighted criteria: (a) relating in the same way to the other, and

Table 2. *Correlations with the RPM of Similarity Ratings from Representative Cases for Factors F1-F5 with Loading of Cases and % Variance Accounted for by the Factors*

		F1	F2	F3	F4	F5
DIRECT ASSOCIATION						
1. with relation AB:		0	0.62	-0.06	0.04	0
2. with relation BA:		0	0.56	0.06	0.04	0
3. with relation AA:		0	0.39	0.06	0.04	0
4. with relation BB:		0	0.21	0.06	-0.04	0
BASIC RPM						
SO program						
5. (1.2)	O-part	0.71	0.15	0.06	0.21	0
6. (3.4)	S-part	0.71	0.03	-0.06	0.29	1.00
SP program						
Terminal part						
7. (1.3)	A=origin	0	0.09	-0.02	-0.29	0
8. (2.4)	B=origin	0	-0.03	0.02	-0.21	0
Origin part						
9. (2.3)	A=terminal	0	-0.09	0.71	0.21	0
10. (1.4)	B=terminal	0	-0.09	0.68	0.29	0
COMPLEX INTERACTIONS						
11. (1.2.3)		0	-0.03	-0.06	0.04	0
12. (1.2.4)		0	-0.21	-0.06	-0.04	0
13. (1.3.4)		0	-0.03	-0.06	-0.04	0
14. (2.3.4)		0	-0.09	0.06	-0.04	0
15. (1.2.3.4)		0	-0.03	-0.02	0.78	0
Factor loading		0.98	0.93	0.96	0.84	0.78
% variance		40%	12%	8%	8%	6%

(b) relating in the same way to the self. The frequent occurrence of this pattern argues for the unity of the SO program. It suggests that, in spite of the zero correlation between rows 5 and 6, the S and O parts are psychologically related. Forming a psychological unit, the concepts of S(elf) and O(ther) evoked by the SO program match respectively the first and second pronominal persons "I" and "Thou". Indeed, according to linguists the first and second pronominal person form a psychological unit as well. They are correlatives that call forth each other and are opposed together to the third pronominal person (Benveniste, 1966).

The Role of Origin and Terminal

As it has been explained, relations are vectors directed from an origin to a terminal. A simple rule of thumb conceives of a relation as an active verb and associates the origin and terminal with the grammatical subject and object. When the passive voice is used, the object becomes the subject, but is still

conceived as a terminal entity. Thus "A liking B" is equivalent to "B liked by A": In both cases, A is the origin entity and B the terminal entity. Properties inferred in A are called "origin properties", e.g.: "liking the other" and "liking B". Properties inferred in B are called "terminal properties", e.g.: "being liked by the other" and "being liked by A". In the presentation of the SO program, the distinction between origin and terminal has been ignored because inferred similarities regarding origin and terminal properties are perfectly convergent. It goes without saying that if A and B are similar in that both like the self, they are also similar in that they are liked by the self. Traits attributed to "A who likes an other" may be quite different from the traits attributed to "A who is liked by an other" (Peeters, 1983), but the full-fledged relational patterns of the RPM are structured in a way making that similarity in "liking the other" goes hand in hand with similarity in "being liked by the other". This convergence of origin and terminal similarities does not extend to the 3P program. Hence in Table 1, the 3P program has been split up into a terminal and an origin part.

The 3P Program

Beginning with the terminal part, row 7 displays AB similarities based on A and B's belonging to the terminal of the same sort of relation originating from him or her named A, e.g.: A and B similar in that A is satisfied with both of them. If the person named A is satisfied with the one and dissatisfied with the other, as in relational pattern c, then A and B are considered dissimilar (indicated by a minus sign in row 7). In an analogous way, row 8 displays AB similarities based on A and B's belonging to the terminal of the same sort of relation originating from B. For instance, in the relational pattern c, A and B are similar in that B is satisfied with both of them.

Turning to the origin part, row 9 displays AB similarities based on A and B's belonging to the origin of the same sort of relation with him/her named A.

For instance, A and B may be similar in that they are equally satisfied with A. In an analogous way, row 10 displays AB similarities based on A and B's belonging to the origin of the same sort of relation with B. Resuming the example of the relational pattern c, the - sign in row 9 indicates that A and B disagree about A, the one being satisfied, the other dissatisfied with A, and the + sign in row 10 indicates that they agree about B, both being satisfied with B.

A typical pattern of correlations obtained from perceivers using the 3P program is presented in Table 2, column F3. The pattern illustrates another early research outcome, which is the clear differentiation between the origin and terminal part of the 3P program (Peeters, 1991). This means that per-

ceivers tend to focus either on attributes associated with the origins of relations or on attributes associated with the terminals. Origin attributes associated with satisfaction relations may be, for instance, norms or standards used to evaluate behavior. The perceived actual behavior then would provide the correspondent terminal attributes. Thus the perceiver in F3 may have regarded A and B as similar if they could be assumed to share the same norms or standards about appropriate behavior. The nearly zero correlations in rows 7 and 8 indicate that the perceiver did not regard A and B as similar if they were assumed to show the same behavior.

The rows representing the SO and 3P program can be obtained by multiplying particular rows from the direct association panel (rows 1-4) in the ways indicated between parentheses in the row heads. Additional multiplicative combinations are presented in rows 11-15. They represent complex interaction effects of relational stimulus information that are hard to interpret. However, they cannot be ignored because they guarantee that the complete variance of perceived AB similarity can be covered by the model.

Thinking in the Third Person Defined by the RPM

Examination of the formal structures in Table 1 shows that the difference between SO and 3P program boils down to whether or not the perceiver accords informational value to reflexivity of relations. Thinking in the first and second person, operationalized by the SO program, implies that inferences drawn from relations vary as a function of whether the relations are reflexive or not. For instance, if Ann and Bill are satisfied with Bill, only Bill may be perceived as conceited because his satisfaction is reflexive. However, thinking in the third person, as defined by the 3P program, a perceiver would ignore that Bill's satisfaction is reflexive and Ann's is not. Being told that Bill is satisfied with himself, the pronoun "self" would be conceived in the third person as referring to "him named Bill" and the perceiver would draw the same inferences with regard to Bill as with regard to Ann. For instance, the perceiver may infer that Ann and Bill evaluate Bill's behavior according to the same standards.

The Nature of Inferences Based on the SO and 3P Programs

The latter example illustrates a general conclusion that urges itself from the research outcomes obtained with the RPM: inferences mediated by the SO program reflect a rather subjectivistic "personalized" discourse, while inferences mediated by the 3P program reflect a rather objectivistic "depersonal-

ized" discourse as in the natural sciences. For instance, attributing SO medi-
ated conceitedness to Bill implies that Bill is conceived as an autonomous
responsible person who can be blamed for his attitude. However, 3P mediat-
ed evaluative standards can be traced in impersonal automatons such as ther-
mostats, which are set for preserving an optimal state.

Numerous studies have highlighted the personalized versus depersonal-
ized nature of inferences perceivers are inclined to draw when using respec-
tively the SO and 3P program. For instance, inferences about personality
have been found to be underlain by the SO program and not at all by the 3P
program (Peeters, 1983). Attempts of the experimenter to facilitate the use of
the 3P program failed for inferences about "personality" but were successful
for inferences about matters such as tastes and preferences that appear not
that deeply rooted in the "person" as is "personality" (Peeters, 1991, 1992a).
More recently, Hendrickx & Peeters (1997) found that the 3P program dom-
inates inferences regarding external human features such as body size and the
amount of money a person owns. The SO program, on the other hand, was
found to dominate inferences regarding internal features such as interperson-
al feelings and concerns. Finally, Peeters & Hendrickx (2002) demonstrated
that the 3P program underlies inferences about the chemical composition of
medicines perceivers draw from effects of the medicines on patients. In that
respect it is worthwhile that in another experiment (Peeters, Grobben,
Hendrickx, Van den Eede, & Verlinden, 2003), participants justified respons-
es underlain by the 3P program arguing that they carried out instructions
"exactly". The point is that there is no reason to qualify the 3P-Pogram as
more "exact" than the SO program, at least not if "exact" is defined in the
usual way as accurate, correct, precise, rigorous, etc. Apparently "exact" car-
ried an additional meaning content, which it may carry also in expressions
such as "exact sciences". The reviewed evidence suggests that this addition-
al meaning may boil down to a reference to the 3P program.

The observed association of the SO and 3P program with respectively a
personalized and a depersonalized discourse fits in with linguists' and
philosophers' views. In his renowned "I and Thou", Martin Buber (1970) has
argued that only linguistic forms said "of the first and second person" are
related to the notion of person "as person". Specifically the "person" has been
conceived as an experiential reality that was established by an encounter of a
subject with an other as *I* with *Thou*. When the subject relates to the other in
the modus of the third person–as to *him*, *her* or *it*–then the other is depersonal-
ized. Specifically, the "person" is reduced to an impersonal "individual",
which means: an "instrument" or mere "object of knowledge" that is not dealt
with as a goal of its own, but as a means towards an end.

In agreement with Buber's philosophy, the French linguist Benveniste
(1966) has stressed the personal character of *I* and *Thou* arguing that they

denote the speaker and addressee of the utterance who are necessarily "persons" or at least are viewed as such. The "third person" however would in essence be an impersonal dummy defined as a "no matter who or no matter what" (o.c., p. 255-256) and referred to as "non-person" (o.c., p. 228). That dummy is an interesting cognitive tool. Indeed, while I and Thou are semantically tied on the identity of the speaker and the addressee, the third person forms an empty slot that can be filled with whatever content one wants[1].

"Filling the slot with content" can be specified as the assignment of attributes (features, functions, processes, etc.). For instance, assigning the attribute "female" the dummy becomes a "she". Similarly, for a student of philosophy the label "Buber" can designate a dummy characterized by a set of attributes including "being the author of *I and Thou*", whereas other attributes such as "male" are perhaps left out of consideration because they are irrelevant to the student's purposes.

The latter example shows that dealing with an object "in the third person" allows for high mental flexibility. Not only can old attributes be ignored and new attributes be created by abstraction, but attributes that in natural experience are united in one set because belonging to the same object can be rearranged into new, arbitrary, sets. These sets can in turn be dealt with as new "hypothetical" objects that may deviate largely from the original "experienced" objects. In this way alternative representations of the world are established that may be better suited to certain purposes than the original representation. A case in point is the representation of the world in physics as a constellation of particles and energetic fields. It has hardly anything in common with the natural world of rocks, trees and sunshine we daily experience by our senses, but it allows for technical achievements that otherwise could only be dreamt of. Hence it may not surprise that "thinking in the third person" may be an important aspect of expertness.

Lay and Expert Knowledge

Having a pleasant drink with friends, a chemist may not praise the wine spelling out chemical formulas. Instead he/she may resort to lyrical descriptions such as: "a somewhat stubborn but honest bottle". Similar descriptions

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[1] Another argument advanced by Benveniste is that personal pronouns "of the third person" are rather exceptional across languages. Among the exceptions there are the familiar Indo-European languages in which certain demonstratives (this one here) developed into "personal" pronouns. A case in point is the French "il" (he) that evolved from the Latin "ille" (that one over there). The queer origin of similar "personal" pronouns is revealed by gender specificity, genuine personal pronouns, such as "I" and "you", having no gender.

are reminiscent of the personalized discourse associated with the SO program. Humans seem not set for acting as experts by default. In the same vein, research outcomes suggest that humans are set for the SO program rather than for the 3P program (Peeters, 1983, 1987, 1991; Peeters & De Wit, 1995). Apparently humans are biased to use the SO program and to form personalized representations of reality, as if the human mind would be set for a sort of animistic world-view (Peeters, 1986, 1989).

The SO program shaping a default level of knowledge, expert knowledge may be argued to involve a switch to the 3P program. This switch would enable to deal with "entities" as "mere sets of attributes and processes" rather than as person-like "beings in themselves". Nevertheless, it would be unwarranted to associate lay knowledge exclusively with the SO program and expert knowledge exclusively with the 3P program. In point of fact, lay and expert knowledge are not independent of each other.

First, achievements of experts may affect lay knowledge as Moscovici (1961) has demonstrated for psychoanalysis. Once they are assimilated by the lay, the originally 3P-anchored constructs may loose the phenomenological status of "mere sets of attributes" and endorse the status of SO-anchored "beings in themselves" (objectification). This phenomenological transformation is consistent with the SO-bias described higher as well as with the theory that the content of awareness is a model of the world composed of objects (Yates, 1985). In this way electrons, that in the expert's hand are abstract energetic fields, become dealt with as individual miniature planets that even may endorse a (metaphorical) personality in the way a phenomenal personality is attributed to objects such as a "honest" wine, and a "shy" little pansy.

Second, a good expert should not disdain valid lay knowledge. He/she may have to rely on lay knowledge in order to complete his/her competence that may be restricted to certain aspects of the problems he/she has to deal with. For instance Sousa (1991) found differences between experts and novices when experts asked questions themselves rather than when they answered questions.

Moreover, Peeters & De Wit (1995) found the SO program dominating psychological inferences drawn by psychologists who were explicitly asked to act as experts and to rely on theories and concepts belonging to their expertise. Thus expertness may not only involve the use of the 3P program, which may be required for shaping particular technical knowledge, but the SO program as well. The SO program may even have a privileged status in psychological expertise. For that reason psychologists may not be the appropriate expert population to demonstrate the role of the 3P program in expertise. Hence the following study was run using musicians as experts. Two hypotheses were advanced: (1) perceivers tend to process social information consistent with the SO program, and (2) the 3P program is more prominent when

the information processed belongs to the perceivers' expertise than when it does not.

A Study on Thinking in the Third Person by Musical Experts

Method

Participants. Musical experts were 55 sophomore music students of the Lemmensinstituut (44% males) who had already an advanced musical education behind them, and 105 psychology sophomores of the University of Leuven (40% males) formed a control group of non-experts. Both groups were invited during a regular class hour to complete one of two questionnaires that were randomly distributed.

Questionnaires. Two questionnaire variants were used referred to as the "performers" and the "spouses" questionnaires. In both questionnaires 16 items reflecting the 16 relational patterns of the RPM were presented. In the "performers" questionnaire, the target persons "A and B" were presented as musical performers being respectively a female singer (in Dutch: "Alt") and her male accompanist (in the Dutch: "Begeleider"). In the "spouses" questionnaire the targets were specified as a married couple: "An" and "Bert". Relations were formulated as "is satisfied with" (positive) and "is not satisfied with" (negative). Thus item m (relational pattern m in Table 1) was formulated as follows:

"A is not satisfied with B; B is not satisfied with A
A is satisfied with herself; B is satisfied with himself"

Items were presented in two different orders that varied randomly across participants. For each item the participants were invited to form impressions of A and B and asked how much they felt A and B might differ from each other. They answered using a rating scale from 0 to 9 that was scored in a way making 9 indicating high similarity (low difference).

Conditions. Combining the two participant groups (musicians and psychologists) with the two questionnaire versions (targets "A and B" presented either as performers or as spouses), we obtained one experimental "expert" condition (musicians rating performers) and three control conditions (musicians rating spouses, psychologists rating performers and psychologists rating spouses).

Results

General outcomes. A Q-type factor analysis with varimax rotation was performed on correlations of the similarity ratings computed between participants over items. Five factors (F1-5) accounted for 74% of the variance, spread over factors as shown in the bottom panel of Table 2. The factors represent prototypical viewpoints, which underlie differences between participants. The nature of these viewpoints is revealed by the results of the participants with the highest factor loadings, which are referred to as "representative cases". Five representative cases were considered, one per factor F1, F2,.. .F5, and the bottom panel of Table 2 displays each case's loading on the factor it represents.

Then, for each participant product moment correlations were computed between the participant's similarity ratings and each of the 15 rows of the RPM presented in Table 1. The upper panels of Table 2 show the correlations obtained for the five representative cases representing factors F1, F2,... .F5.

F1, which accounts for 40% of the variance, represents the most important viewpoint. It coincides perfectly with the SO program. Also F5 represents the SO program, although only the S part, differences being assigned to A and B if one of them is satisfied with the self, and the other is dissatisfied, with the self.

F2 reflects the use of an inference rule of the type "Birds of one feather flock together". Similarity is directly associated with A's satisfaction with B (row 1) and of B's satisfaction with A (row 2).

F3 reflects the 3P program, specifically the "origin" part: differences between A and B are associated with disagreement. The object of the disagreement is "her called A" (row 9) as well as "him called B" (row 10).

Finally, the high correlation with row 15, which characterizes F4, is irrelevant to the aims of the present study and, moreover, hard to interpret.

Altogether, the main outcome is that the SO program (F1 and F5) accounts for as much as 46% of the variance, while the 3P program (F3) only for 8%.

Effects of conditions. In order to compare the prominence of the factors across conditions, the percentage of participants loading higher than .30 on the factors was computed for each condition separately. The results are presented in table 3. For each factor, *p*-values of differences between conditions were computed using Chi-square tests for independent samples (with Yates correction if Fe<6).

The SO program (F1) is less prominent in the experimental "expert" condition (musicians/performers) than in the three control conditions. Differences with control conditions are significant except with the musicians/spouses condition. However, the difference is significant if the cut-off point of loadings is raised from .30 to .80, in which case the present 55% and

Table 3. *Effects of Conditions*

Conditions			Percentage of participants							
			With loading > .30					SO-3P dominant		
Subjects	Targets	N	F1	F2	F3	F4	F5	SO	3P	Diff.
Musicians	Performers	29	55_a	41_a	45_a	28	3_a	48	48	00_a
	Spouses	26	69_{ab}	38_{ab}	23_b	19	8_{ab}	77	19	58_b
Psychologists	Performers	52	77_b	17_c	19_b	27	19_b	77	15	52_b
	Spouses	53	79_b	23_{bc}	15_b	21	17_{ab}	79	15	54_b

Note: Wholly different subscripts denote percentages that differ significantly across rows at $p < .05$ (one-tailed)

69% are reduced respectively to 3% and 23% (1-tailed $p<.04$ by Fisher Exact Probability Test). For the other control conditions, percentages would be reduced to 35% and 36%, the contrast with the experimental "expert" condition being preserved and even accentuated ($p<.001$ for musicians/performers versus psychologists/performers and $p<.0006$ for musicians/performers versus psychologists/spouses). As to the minor SO related factor F5, differences are in the predicted directions but, in general, not significant, which may be due to the small number of participants loading on that factor.

Consistent with the expectations, the 3P program (F3) is more prominent in the musicians/performers condition than in the other conditions whereby the difference with the musicians/spouses condition is significant.

In an additional analysis, the relative prominence of the SO program was compared with that of the 3P program in a more direct way. For each participant, correlations relative to the SO and 3P program were compared. If the highest positive correlation belonged to the SO program (rows 5-6), the participant was classified as SO-dominant, and if it belonged to the 3P program (rows 7-10) the participant was classified as 3P-dominant. Ties and the rare cases with only negative correlations were not counted. The numbers of SO- and 3P-dominant participants in the various conditions are presented in table 3 (two last columns). As expected, there is significantly more 3P-dominance in the experimental "experts" condition (musicians rating musical performers) than in each of the three control conditions. For the rest, the analysis confirms the previous observation that the SO program is more prominent than the 3P program: it dominates the 3P program in the control conditions and does not drop behind the 3P program in the experimental musicians/performers condition.

Finally, there are some significant differences in the use of the inference rule associating similarity with positive feelings (F2). These differences seem not related to expertness but to participant group, musicians being more inclined to the rule than psychologists are (2-tailed $p<.007$).

Discussion

The hypothesis that perceivers tend to process social information consistent with the SO program is confirmed by the large amount of variance accounted for by factors representing the SO program (F1 and F5) as well as the dominance of the SO program in comparison with the 3P program.

The hypothesis that the 3P program is more prominent when the information processed belongs to the perceivers' expertise, is confirmed as well. The 3P program was significantly more prominent in the "experts" condition, where musicians rated musical performers, than in control conditions where musicians rated spouses, or where psychology students rated performers or spouses.

The larger the proportion of the variance accounted for by the 3P program, the smaller the proportion left for the SO program. Hence it may not surprise that the SO program tended to be less prominent in the "experts" condition (musicians rating performers) than in the control conditions. However, even then, the SO program did not drop below the level of the 3P program, which argues for the hypothesized prominence of the SO program.

An unanticipated outcome revealed by factor F3 is that when participants used the 3P program, only the "Origin-part" was involved. Thus A and B were perceived as "different" if they disagreed about the same specific performer and not if they were evaluated differently by the same individual. This result does not detract from the expected use of the 3P program. Indeed, in order to have the 3P program confirmed, it suffices that outcomes fall within the range of possibilities allowed for by the 3P program without exhausting them all. However, it is worthy of mention that the tendency to use the origin part has been observed before (Peeters, 1983, 1991, 1992a). For instance, given the information that A likes B, perceivers were found to infer likableness only in A but not in B except if B liked A in turn.

Another unanticipated outcome is factor F4 characterized by a high correlation with row 15 indicating a complex interaction effect of the relational stimulus information. As F4 is hard to interpret and does not involve significant differences between conditions (Table 3), it is further ignored.

It is worth mentioning that, as in previous studies, negative correlations were rather exceptional. Within the range of the SO and 3P programs (rows 5-10), only 9% out of 337 correlations beyond +/- .25, were negative. It has been explained elsewhere that these correlations do not simply contradict the SO or 3P program but reveal complex interactive combinations of both programs (Peeters, 1991; Peeters & De Wit, 1995). Hence, one could argue that they fit the high cognitive complexity and differentiation that would mark the expert's thinking. Consistent with this rationale, their number increased to 16% (out of 63 correlations) in the experimental "musicians/performers"

condition, and this effect would be significant if correlations obtained from the same participant could be considered as independent data (1-tailed *p*<.03).

Finally, it may be worthwhile to pay some attention to the results reported regarding F2. This factor confirms an early observation (Peeters, 1976) that was repeatedly replicated (Peeters, 1983, 1991) and suggests that perceivers are inclined to infer similarities in a way consistent with the adage that birds of one feather flock together rather than with "Opposites attract". In the perspective of the present study, the relevant outcome regarding F2 is that, like F5, it seems not related to expertness in a particular way. Apparently, effects associated with "expertness" are restricted to the SO and 3P programs.

Altogether the 1957 edition of the APA manual may have a point. The answer to the question of whether the third person is a mark of expertness seems affirmative, although with some qualifications. One main qualifications is that thinking in the third person should be regarded as a matter of implicit cognitive organization, which does not require the explicit use of particular linguistic codes such as the pronouns *he* and *she*. Hence the third person may not be just a cover affirming the expert's identity, but it may be connected with a functional aspect of the expert's thinking. If, in agreement with Bever (1970), cognitive organization is conceived in terms of relations between entities, thinking in the third person can be defined as a way of thinking in which the distinction between reflexive and non-reflexive relations is ignored. It is a way of thinking that makes the sentences "John wants to pay his bills" and "Peter wants to pay John's bills" communicate the same information about John as about Peter, both paying the same bills. It helps the expert to develop an objectivistic, depersonalized view that stresses objectively verifiable circumstances – such as the availability of money – rather than elusive subjective features, such as a sweet-tempered character attributed to Peter because he's willing to pay another's bills.

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