Theory of cognitive distortions: personalisation

Preprint

Changes may have been made to this work since its submission for publication. Changes resulting from the publishing process, such as peer-review, editing, corrections, structural formatting, and other quality control mechanisms may also not be reflected on this preprint.

Paul FRANCESCHI
University of Corsica
p.franceschi@univ-corse.fr
http://www.univ-corse.fr/~franceschi

Summary

In a previous paper (Compléments pour une théorie des distorsions cognitives, *Journal de Thérapie Comportementale et Cognitive*, 2007), we did present some elements aimed at contributing to a general theory of cognitive distortions. Based on the reference class, the duality and the system of taxa, these elements led to distinguish between the general cognitive distortions (dichotomous reasoning, disqualification of one pole, minimisation, maximisation) and the specific cognitive distortions (disqualifying the positive, selective abstraction, catastrophism). By also distinguishing between three levels of reasoning - the instantiation stage, the interpretation stage and the generalisation stage - we did also define two other cognitive distortions: over-generalisation and mislabelling (Théorie des distorsions cognitives : la sur-généralisation et l'étiquetage, *Journal de Thérapie Comportementale et Cognitive*, 2009). We currently extend this model to another classical cognitive distortion: personalisation.

KEYWORDS cognitive therapy, cognitive distortions, personalisation, personalising bias, ideas of reference, delusion of reference.

In Franceschi (2007), we set out to introduce several elements intended to contribute to a general theory of cognitive distortions. These elements are based on three fundamental notions: the reference class, the duality and the system of taxa. With the aid of these three elements, we could define within the same conceptual framework the *general* cognitive distortions such as dichotomous reasoning, disqualification of one pole, minimisation and maximisation, as well as requalification in the other pole and omission of the neutral. In the same way, we could describe as *specific* cognitive distortions: disqualification of the positive, selective abstraction and catastrophising. In Franceschi (2009), we introduced three levels of reasoning - the instantiation stage, the interpretation stage and the generalisation stage, which allowed to define within the same conceptual framework, two other classical cognitive distortions: *over-generalisation* and *mislabelling*. In the present paper, we set out to define and to situate in this conceptual framework another classical cognitive distortion: *personalisation*.

Personalisation constitutes one of but twelve classically defined cognitive distortions: emotional reasoning; over-generalisation; arbitrary inference; dichotomous reasoning; should statements; divination or mind-reading; selective abstraction; disqualification of the positive; maximisation/minimisation; catastrophising; personalisation; mislabelling (Ellis 1962, Beck 1964). Personalisation is usually defined as the fact of attributing unduly to oneself the cause of an external event. For example, seeing a person who laughs, the patient thinks that it is because of his/her physical appearance. Also, the patient makes himself/herself responsible

for a negative event, in an unjustified way. If his/her companion then failed his/her examination, the patient estimates that is due to the fact that he/she is depressed. In what follows, we propose first to clarify the definition of personalisation and to situate it in the context of the theory of cognitive distortions (Franceschi 2007, 2009). Secondly, we set out to clarify the relationships existing between personalisation and several close notions mentioned in the literature: personalising bias (Langdon et al. 2006), ideas of reference (Startup & Startup 2005, Meyer & Lenzenweger 2009) and delusions of reference.

Personalisation and post hoc fallacy

We will set out first to highlight the mere structures of the cases of personalisation. Let us consider the aforementioned example where the patient sees a person who laughs and thinks that this one laughs because of the patient's physical appearance. This constitutes an instance of personalisation. We can describe more accurately the reasoning which underlies such instance (in what follows, the symbol ∴ denotes the conclusion):

($P1_1$)	in T_1 I went for a walk	$premiss_1$
($P1_2$)	in T_2 started to laugh	$premiss_2$
($P1_3$)	∴ in T_2 started to laugh because he saw that in T_1 I went for a walk	$conclusion_1$
($P1_4$)	∴ in T_2 the peasant made fun of me	$conclusion_2$

The patient puts here in relationship an internal event (“I went for a walk”) with an external event (“the peasant started to laugh”). He/she concludes then that the internal event is the *cause* of the external event. In this stage, the patient "personalises" an external event, which he/she considers to be the effect of an internal event, while this external event is in reality devoid of any relationship with the patient himself/herself. In a subsequent stage ($P1_4$), the patient interprets the previous conclusion ($P1_3$) by considering that the peasant made fun of him.

At this stage, it is worth wondering about the specific nature of the patient's error of reasoning. It appears here that both premises ($P1_1$) and ($P1_2$) constitute genuine facts and therefore turn out to be true. On the other hand, the conclusion ($P1_3$) which concludes to the existence of a relation of causality between two consecutive events E_1 (“In T_1 I went for a walk”) and E_2 (“In T_2 the peasant started to laugh”) appears to be unjustified. Indeed, both premises are only establishing a relation of anteriority between the two consecutive facts E_1 and E_2. And the conclusion ($P1_3$) which deducts from it a relation of causality turns out therefore to be too strong. The argument proves here to be invalid and the corresponding reasoning is then fallacious. The corresponding error of reasoning, which concludes to a relation of causality whereas there is only a mere relation of anteriority, is classically termed *post hoc fallacy*, according to the Latin sentence “Post hoc, ergo propter hoc” (after this therefore because of this). It consists here of a very common error of reasoning, which is notably at the root of many superstitions (Martin 1998, Bressan 2002).

In this context, we can point out that the case of post hoc fallacy which has just been described as an argument of personalisation, also constitutes a case of *arbitrary inference*, another classically defined cognitive distortion.

Steps of instantiation, of interpretation and of generalisation at the level of the arguments of personalisation

At this step, it proves to be useful to draw a distinction between the levels of arguments that lead to personalisation as cognitive distortion. This leads to differentiate three levels within the arguments of personalisation, among the reasoning' stages. The latter correspond respectively to three different functions: it consists of the successive stages of *instanciation*, of *interpretation* and of *generalisation*. To this end, it is useful to describe the whole reasoning which underlies the arguments of personalisation and which includes the three aforementioned stages:

($P1_1$)	in T_1 I went for a walk	$premiss_{11}$
($P1_2$)	in T_2 the peasant started to laugh	$premiss_{12}$
($P1_3$)	∴ en T_2 the peasant started to laugh because he saw that in T_1 I went for a walk	$conclusion_{11}$
($P1_4$)	∴ in T_2 the peasant made fun of me	$conclusion_{12}$
($P2_1$)	in T_3 I was leafing through a magazine in the library	$premiss_{21}$
($P2_2$)	in T_4, the librarian smirked	$premiss_{22}$
($P2_3$)	∴ en T_4 the librarian smirked because in T_3 I was leafing through a magazine in the library	$conclusion_{21}$
($P2_4$)	∴ in T_4, the librarian made fun of me	$conclusion_{22}$
($P3_1$)	in T_5 I did enter in the show-room	$premiss_{31}$
($P3_2$)	in T_6, my colleagues started to laugh	$premiss_{32}$
($P3_3$)	∴ in T_6, my colleagues started to laugh because in T_5 I did enter in the show-room	$conclusion_{31}$
($P3_4$)	∴ in T_6, my colleagues were laughing at me	$conclusion_{32}$
(...)		
($P10_5$)	∴ people make fun of me	from ($P1_4$)-($P10_4$)

Here, the instances of the previous arguments ($P1_1$)-($P1_3$), ($P2_1$)-($P2_3$), ($P3_1$)-($P3_3$), etc. constitute primary stages of arguments of personalisation, by which the patient considers that an event related to him/her is the cause of an external event. This type of argument corresponds to the stage of instantiation. As mentioned earlier, such argument is fallacious since it is based on post hoc fallacy. In a subsequent stage the function of which is interpretative, and that is aimed at making sense of the conclusions ($P1_3$), ($P2_3$), ($P3_3$), ... of the instances of arguments of the previous type, the patient interprets it by concluding that some people made fun of him. Such conclusions ($P1_4$), ($P2_4$), ($P3_4$) appear to be grounded, *inasmuch* as the premisses ($P1_3$), ($P2_3$), ($P3_3$) are true. Finally, in a subsequent stage of generalisation, the patient enumerates some instances or circumstances where he/she thinks that people laughed or made fun of him/her (($P1_4$), ($P2_4$), ($P3_4$), ...) and generalises then to the conclusion ($P10_5$) according to which people make fun of him/her. This last stage is of an inductive nature, and corresponds to an enumerative induction, the structure of which is the following:

($P1_4$)	in T_2 the peasant made fun of me	$conclusion_{12}$
($P2_4$)	in T_4, le librarian made fun of me	$conclusion_{22}$
($P3_4$)	in T_6, my colleagues were laughing at me	$conclusion_{32}$
(...)		
($P10_5$)	∴ people make fun of me	from ($P1_4$)-($P10_4$)

Given what precedes, we can from now on provide a definition of personalisation. The preceding analysis leads then to distinguish between three stages in arguments of personalisation. At the level of primary arguments of personalisation (stage of instantiation), it consists of the tendency in the patient to establish an unjustified relation of causality between two events, among which one is external and the other one is internal to the patient. The patient personalises then, that is to say puts in relationship with himself/herself, an external event, which proves to be in reality devoid of any relation of causality. The mechanism which underlies such argument consists then of the erroneous attribution of a relation of causality, based on post hoc fallacy. At the level of secondary arguments of personalisation (stage of interpretation), the patient makes sense of the previous conclusion by concluding that *at a given time*, a person (or several persons) made fun of him, laughed at him, etc. Finally, at the level of arguments of ternary personalisation (stage of generalisation), the patient concludes that, *in a general way*, people make fun of him.

Personalisation and personalising bias

At this step, it proves to be useful to distinguish personalisation as cognitive distortion from *personalising bias*. The latter is defined as an attribution bias (“personalising attributional bias"), by whom the patient attributes to other persons rather than to circumstances the cause of a negative event (McKay & al. 2005, Langdon & al. 2006). Personalising bias is often related to polythematic delusions (Kinderman & Bentall 1997, Garety & Freeman 1999, McKay & al. 2005) met in schizophrenia.

Considering this definition, the difference between the two notions can be thus underlined: in personalisation as cognitive distortion, the patient attributes the cause of an external event to an event which concerns the patient himself/herself; on the other hand, in personalising bias the patient attributes the cause of an internal event to external persons. This allows to highlight several fundamental differences between the two notions. Firstly, in personalisation as cognitive distortion, the "person" is the patient himself/herself, while in personalising bias, it consist of external "persons". Secondly, in the structure of personalisation, an internal event precedes an external event; by contrast, in the scheme of personalising bias, it is an external event which precedes an internal event. Finally, in personalisation as cognitive distortion, the internal event is indifferently of a positive, neutral or negative nature, whereas in personalising bias, the internal event is of a negative type. Hence, it finally proves to be that both notions appear fundamentally distinct.

Personalisation and ideas of reference

It appears also useful, for the sake of clarity, to specify the relationships between personalisation and *ideas of reference*. It is worth preliminary mentioning that one usually distinguishes between ideas of reference and delusions of reference (Dziegielewski 2002, p. 266). Ideas of reference characterise themselves by the fact that a patient considers that insignificant events relate to himself/herself, while is not the case in reality. For example, the patient hears several persons laugh, and considers, in an unjustified way, that the latter make fun of him/her. In parallel, delusions of reference constitute one of the most salient symptoms noticed in schizophrenia, and leads the patient to be persuaded that the media, television, or the radio speak about him/her or issue messages concerning him/her. Several criteria allow to draw a distinction between ideas of reference and delusions of reference. First, ideas of reference have much less impact on the patient's life than reference delusions of reference. Second, the degree of conviction which is associated with ideas of reference is far lesser than with delusions of reference. Lastly, ideas of reference (“the neighbour made fun of me”) are related with beliefs the degree of plausibility of which is much stronger than the one which is inherent to delusions of reference (“newspapers speak about me”).

In this context, the aforementioned arguments of personalisation ($P1_1$)-($P1_4$), ($P2_1$)-($P2_4$), and ($P3_1$)-($P3_4$), by whom the patient concludes that some people make fun of him, corresponds completely to the definition of ideas of reference. It appears then that personalisation, such as it was defined above as cognitive distortion, identifies itself with ideas of reference.

Personalisation and delusion of reference

One traditionally distinguishes at the level of polythematic delusions met in schizophrenia between: delusions of reference, delusions of influence, delusions of control, telepathy-like delusions, delusions of grandeur, and delusions of persecution. Delusions of reference leads for example the patient to believe with a very strong conviction that the media, the newspapers, the television speak about him/her.

It is worth describing here a mechanism which is susceptible to lead to the formation of delusions of reference. Such mechanism appears to be grounded on a reasoning (Franceschi 2008) which includes, as well as the above-mentioned primary instances of personalisation, a post hoc fallacy:

($DR1_1$) in T_1 I was drinking an appetizer $premiss_{11}$

($DR1_2$)	in T_2 the presenter of the show said: “Stop drinking!”	$premiss_{12}$
($DR1_3$)	∴ in T_2 the presenter of the show said: “Stop drinking!” because in T_1 I was drinking an appetizer	$conclusion_{11}$
($DR1_4$)	∴ in T_2 the presenter of the show spoke about me	$conclusion_{12}$

Consider also this second instance :

($DR2_1$)	in T_3 I hardly got out of bed	$premiss_{21}$
($DR2_2$)	in T_4 the radio presenter said: “Be forceful:”	$premiss_{22}$
($DR2_3$)	∴ in T_4 the radio presenter said: “Be forceful:” because in T_3 I hardly got out of bed	$conclusion_{21}$
($DR2_4$)	∴ in T_4 the radio presenter spoke about me	$conclusion_{22}$

At the level of the instantial step ($DR1_1$)-($DR1_3$), ($DR2_1$)-($DR2_3$), ... the patient concludes here that an internal event is the *cause* of an external event. In a further interpretative stage, he/she interprets the conclusions ($DR1_3$), ($DR2_3$), ... of the preceding arguments by considering that the presenters of radio or of television speak about him/her. Finally, in a generalisation step, of inductive nature, the patient enumerates the conclusions ($DR1_4$), ($DR2_4$), ... of secondary arguments (interpretation stage) and generalises thus:

($DR1_4$)	∴ in T_2 , the presenter of the show spoke about me	
($DR2_4$)	∴ in T_4, the radio presenter spoke about me	
(...)		
($DR10_5$)	∴ the media speak about me	conclusion

It proves then that the structure of the mechanism which leads to the formation of delusions of reference thus described, is identical to that of the reasoning which leads to ideas of reference which is associated with personalisation as cognitive distortion.

Finally, it appears that the preceding developments allow to provide a definition of personalisation and to situate it in the context of cognitive distortions (Franceschi 2007, 2009). Personalisation is then likely to manifest itself at the level of primary, secondary or ternary pathogenic arguments, which correspond respectively to the stages of instantiation, of interpretation, and of generalisation. At the level of primary pathogenic arguments, corresponding to a function of instantiation, it consists of instances, the conclusions of which lead the patient to conclude in an unjustified way that some external events are caused by some of his/her actions. At the level of secondary pathogenic arguments, which correspond to a function of interpretation, personalisation takes the form of a reasoning by which the patient interprets the conclusion of primary pathogenic argument by concluding for example that people make fun of him/her. Finally, at the level of ternary pathogenic arguments, associated with a function of generalisation, the patient generalises from the conclusions of several secondary pathogenic arguments and concludes that, in a general way, people make fun of him/her.

Lastly, it appears that the previous definition of personalisation as cognitive distortion allows to describe precisely the relationships between personalisation and close notions such as personalising bias, ideas of reference and delusions of reference.

References

Beck A. Thinking and depression: Theory and therapy. Archives of General Psychiatry 1964; 10:561-571.

Bressan, P. The Connection Between Random Sequences, Everyday Coincidences, and Belief in the Paranormal. *Applied Cognitive Psychology*, 2002, 16, 17-34.

Dziegielewski, S. F. DSM-IV-TR in action, Wiley, New York, 2002.

Ellis A. Reason and Emotion in Psychotherapy, Lyle Stuart, New York, 1962.

Franceschi P. Compléments pour une théorie des distorsions cognitives. *Journal de Thérapie Comportementale et Cognitive*, 2007, 17-2, 84-88. Preprint in English: http://cogprints.org/5261/

Franceschi P. Une défense logique du modèle de Maher pour les délires polythématiques. *Philosophiques*, 2008, 35-2, 451-475. http://id.erudit.org/revue/philoso/2008/v35/n2/000437ar.html

Franceschi P. Théorie des distorsions cognitives : la sur-généralisation et l'étiquetage. *Journal de Thérapie Comportementale et Cognitive*, 2009, 19-4, in press.

Garety, P., Freeman, D., 1999. Cognitive approaches to delusions: a critical review of theories and evidence. *British Journal of Clinical Psychology* 38, 113-154.

Langdon R., Cornera T., McLarena J., Wardb P. & Coltheart M., 2006, Externalizing and personalizing biases in persecutory delusions: The relationship with poor insight and theory-of-mind, *Behaviour Research and Therapy*, 44:699-713

Kinderman, P., Bentall, R., 1997. Causal attributions in paranoia and depression: internal, personal, and situational attributions for negative events. *Journal of Abnormal Psychology* 106 (2), 341- 345.

Martin, B. Coincidences: Remarkable or random. *Skeptical Inquirer*, 1998, 22-5, 23-27.

McKay, R., Langdon, R. & Coltheart, 2005. M. Paranoia, persecutory delusions and attributional biases, *Psychiatry Research*, 136, 233–245

Meyer, E., Lenzenweger, M., 2009. The specificity of referential thinking: A comparison of schizotypy and social anxiety, *Psychiatry Research*, 165, 78-87.

Startup, M., Startup, S., 2005. On two kinds of delusion of reference, *Psychiatry Research* , 137, 87-92.