This is an Accepted Manuscript of an article published by Taylor & Francis in Psychological Inquiry on August 18, 2017, available online:

http://www.tandfonline.com/10.1080/1047840X.2017.1338090.

The fish is wearing trousers: taking issue with the Theory of Affective Pragmatics

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Andrea Scarantino proposes of a new 'Theory of Affective Pragmatics' (TAP). The title holds great promise, but in its current form I am not convinced that this theory manages provides fundamental new insights, or generates a promising research program. On the contrary, I fear that the application of Speech Act Theory to emotion expression has considerable potential for creating confusion, rather than clarification. My central critique is that by applying concepts derived for human speech, arguably a highly derived mode of communication, to communication in general, i.e. across a broader array of species, a number of problems are created that simpler evolutionary conceptions of communication avoid. Further, I will point out that the distinction of the roles of senders and receivers is necessary to prevent fallacious inferences. For a general theory of communication, I recommend asking fundamental 'bottom-up' questions about mechanisms and functions, instead of relabeling a highly successful body of theory in order to apply it to a fundamentally different type of behavior - as if fitting a fish with a pair of trousers. In what follows, I will first critically discuss the main proposition put forward in this article (largely skipping Scarantino's critique of Ekman's and Fridlund's work, though), and then turn to a few other points that require attention.

Before I delve into the matter proper, I would like to point out my conception of emotion expression is not fundamentally different from that of Andrea Scarantino. I follow the view that (i) emotion expressions are tied to some internal state that most likely reflects an animal's evaluation of the situation and/or its action tendency, and that (ii) signals evolved because they have the function to affect the receiver's behavior

(Maynard Smith & Harper, 2003). Scarantino understands "emotional expressions as voluntary or involuntary behaviors that carry natural information about emotions, are designed to help signalers influence the behavior of receivers and allow receivers to predict the behavior of signalers" (p. xx). We do however come to different conclusions whether TAP helps us to understand emotional communication better.

The main move of TAP is to apply (parts of) Searle's Speech Act Theory to emotion expressions. One central tenet of Speech Act Theory is that language is not only of interest in terms of analyzing its linguistic content, but also in terms of its (social) function. Let's examine in turn the illucotionary acts that Scarantino finds useful for an understanding emotion expressions. For the reader's ease, I am repeating the quote from Searle:

"We tell people how things are (Assertives), we try to get them to do things (Directives), we commit ourselves to doing things (Commissives), we express our feelings (Expressives), and we bring about changes in the world through our utterances (Declarations)" (Searle 1979, viii).

Scarantino proposes that we can identify Speech Act Analogues (SAAs) in emotion expressions, which he defines as "any behavior that naturally means roughly what a speech act non-naturally means" (p. xx). He identifies four types of

communicative moves ("things one does "does" in expressing emotions"). The wagging of a dog's tail would be a communicative move of the Expressive type, with the subscript EE standing for "emotional expression". Behavior that prompts the receiver to do something, would be classified as an "Imperative EE". An example might be the threat stare of a monkey, the function of which is to repel another individual. Up to this point, one might say that the application of these terms is simply a question of taste for different labels – they do not constitute a substantial difference compared to the definition of communication given above: they are tied to some internal state and have been selected for because they influence other individuals' behavior.

Issues become murkier when we turn to the next two points, namely

Declaratives_{EE} and Commissives_{EE}. According to Scarantino, Declaratives_{EE} "have the communicative point of representing how things are in the world by means of natural information transfer, and they have a mind-to-world direction of fit because their content aims to fit what the world is like". Now is a monkey's fear grimace representing how things are in the world? And if so, to whom? It is a recurrent problem in analyses of communicative processes that signalers and receivers are not clearly distinguished, despite the fact that the flexibility and cognitive sophistication differs substantially between the two roles (Fischer & Price, 2017; Seyfarth & Cheney, 2003). Because we cannot ask the animals directly, *receivers'* responses are frequently used to make inferences about *signal* meaning (Wheeler & Fischer, 2012). Although communication consists of the interaction between signalers and receivers, both parties play different

roles and may be affected by different constraints. This is relevant when we aim to understand the mechanisms and the function of communicative behavior, and to judge the value of the proposed TAP.

Let's return to Scarantino's definition of Declaratives_{EE}. According to my reading, this category refers to the fact that receivers (or observers) may be able to make inferences about the antecedents or causes of certain emotion expressions. An alternative reading might be that an emotion eliciting event may also be related to a specific mental representation of the world. Either way, this is surely very different from Declarations according to Searle (such as appointing someone as the chairman who is then the chairman, (Searle 1979, p. 17). I fear that people may gloss over these fundamental differences in the two conceptions, and that the choice of the term "Declarative" – no matter what the subscript – may lead to erroneous conclusion, such as that emotional communication constitute Speech Acts (for a similar effect, see the debate about animal "culture" (Fischer, 2017)).

Finally, what about Commissives_{EE}? As Scarantino states, these "have the communicative point of committing the sender to a future course of action by means of natural information transfer. [...] This is what Commissives_{EE} have in common with Commissives_L [in Searle's sense of the term - JF], namely that their contents describe how the world is to be changed by the signaler" (p. xx). But do specific emotion expressions effectively commit the signaler to do certain things? I believe not. In fact, in some instances, signals serve the function of 'not having to do certain things'. Display signals,

for instance are used to avoid the costs of physical fighting (Maynard Smith & Harper, 2003). Generally, though, emotion expressions are related to specific action tendencies, increasing the likelihood that certain behaviors will follow. In Speech Acts, in contrast, Commissives in Speech Act Theory set up an obligation to perform a certain action. They therefore have a normative connotation, which lacks in animal communication. Yet, finding that certain contingencies between signal use and subsequent behavior exist does — in my view — does not warrant the use of the term 'Commissives'.

Expression taxonomy is that for Speech Acts, the taxonomy serves to *distinguish between different types of Speech Acts*, and to investigate syntactical correlates of these different types. Thus, typically, a declarative utterance has a different structure than a commissive one. An emotion expression, in contrast, can be *a member of all categories at the same time*, just depending on which aspect one focusses in the analysis. To give an example: baboons (members of the genus *Papio*) frequently produce low amplitude tonal vocalizations in affiliative interactions with others. Detailed analyses demonstrated that lower ranking animals are more likely to tolerate the approach of a higher-ranking animal when the latter is grunting (Silk, Seyfarth, & Cheney, 2016). These grunts have thus been conceived (Cheney, Seyfarth, & Silk, 1995) as a signals of benign intent (Expressive), which function to mollify the receiver who then stays put instead of getting out of the way (Imperative). Hearing that a higher-ranking female is grunting to a lower-ranking one may allow the observer to make some inferences, such as that the lower ranking female

must be carrying an infant, because otherwise the higher-ranking female would not be grunting to her (nonhuman primate females generally have a high interest in other females' babies and frequently aim to touch or handle them) — but the sender is not making any declarations about the state of the world (note that in many mammal species, specific types of calls may occur in a variety of contexts). In some cases of cases, the state of the world is easier to infer, such as in case of predator-specific alarm calls, for instance (Price et al., 2015). Finally, there may indeed be a contingency between signal use and subsequent behavior, but as stated above, the use of the term 'commissivees' does not seem to be helpful to me. Instead, I would strongly recommend to use a different terminology altogether.

One may object that a focus on human emotion expression may remedy the situation, and that TAP works in the human context. Let's assume you see a child whose ice-cream cone has just dropped to the floor. The child is crying. We assume that the crying is an expression of despair (or anger), and that the child wants you to come to its help – perhaps do a magic trick and reverse the action, or simply buy a new cone of ice. With the aid of the cues available, you as an observer are able to infer what happened (the declarative part), but the crying itself is not sufficiently specific to make a statement about the state of the world (except that it is bad). We may also make some predictions how the child is going to behave next, but the idea of using the term 'commissives' appears to be too far stretched here.

In summary, terms are borrowed from Speech Act Theory and then redefined and adjusted (which always has great potential for creating confusion) to describe aspects of communicative behavior that can readily be described in available terms: what are the mechanisms generating the behavior (e.g. emotional states), what is the function of the behavior (how do others typically respond), what can receivers infer from the behavior about past events, and what can they infer about future actions.

Generally, throughout the development of the TAP, it would have been helpful to clarify whether certain statements are meant to apply to humans and animals. Only humans have a sophisticated theory of mind and are able to establish a common ground in their communication (which is relevant for the understanding of intentional communication). Further, humans can develop a much higher control over facial and other emotion expression. Thus, the display (and to a lesser degree also the form) of emotion expressions in humans is subjected to cultural conventions. Further, humans are able to feign emotion expressions, and receivers know this (Drolet, Schubotz, & Fischer, 2013). Indeed, if emotion researchers would not be able to instruct actors or lay-people to produce facial expressions or vocal emotional expressions on command, they would have a much harder time assembling the specimens they use in their research. In conjunction, human emotional expression can develop intractable layers of beliefs and assumptions, which are either not known (or perhaps simply not accessible to us) in animals.

Clearly, animals are able to control their bodily postures, but in terms of facial expressions, I know of no study that aimed to train an animal to deliver a certain facial emotion expression. Notably, researchers have spent months, if not years, to get nonhuman primates to produce vocalizations on command, with only very limited success: although monkeys have some control over the use of their vocalizations, control over the structure of calls is much more limited (Fischer 2016). Counter to this view, and referring to Fridlund (1994), Scarantino states that "widespread audience-effects undermine the core assumption that all emotional expressions are involuntary". In the animal literature, audience effects refer to the fact that the signaling may change in the presence of conspecifics or other receivers (Zuberbühler, 2008). For instance, a monkey might cease alarm calling when no conspecifics are around, although a predator is lurking. Chicken might increase their food-calling when chicks are near. Yet, one cannot rule out that the presence of others alters the internal state of the signaler in such a way that the signaling is different, without the need to invoke voluntary control over signal structure and usage. Irrespective, there is good evidence that nonhuman primates have some control over the usage of their vocalizations (Jürgens, 2009). In addition to a number of experimental studies, any field researcher who has studied unhabituated primates in the wild will be able to testify how the animals can be eerily silent when tracked by researchers.

In summary, I object to the proposition that "most of what we can do with language, we can also do with non-verbal emotional expressions". In fact, this statement

is a case in point that the use of similar terms for fundamentally different things lead to fallacious conclusions. It is not surprising that I am not convinced that TAP provides a framework for understand the evolution of language, or in which way it would help us to generate an empirical research program. I, for one, will therefore stick to the more conventional frameworks.

References

- Cheney, D. L., Seyfarth, R. M., & Silk, J. B. (1995). The role of grunts in reconciling opponents and facilitating interactions among adult female baboons. *Animal Behaviour*, *50*, 249–257.
- Drolet, M., Schubotz, R. I., & Fischer, J. (2013). Explicit authenticity and stimulus features interact to modulate BOLD response induced by emotional speech. *Cognitive, Affective & Behavioral Neuroscience*, *13*(2), 318–29. http://doi.org/10.3758/s13415-013-0151-0
- Fischer, J. (2017). Information transmission in nonhuman primates: From communication to social learning. In J. Byrne (Ed.), *Learning and Memory: A Comprehensive Reference* (2nd ed.). Oxford: Elsevier.
- Fischer, J., & Price, T. (2017). Meaning, intention, and inference in primate vocal communication. *Neuroscience & Biobehavioral Reviews*, available online.

- http://doi.org/10.1016/j.neubiorev.2016.10.014
- Jürgens, U. (2009). The neural control of vocalization in mammals: A review. *Journal of Voice*, *23*(1), 1–10. http://doi.org/10.1016/j.jvoice.2007.07.005
- Maynard Smith, J., & Harper, D. (2003). *Animal Signals. Oxford Series in Ecology and Evolution*. Oxford: Oxford University Press.
- Price, T., Wadewitz, P., Cheney, D., Seyfarth, R., Hammerschmidt, K., & Fischer, J. (2015).

 Vervets revisited: A quantitative analysis of alarm call structure and context

 specificity. *Scientific Reports*, 5(13220), 1–11. http://doi.org/10.1038/srep13220
- Seyfarth, R. M., & Cheney, D. L. (2003). Signalers and receivers in animal communication.

 Annual Review of Psychology, 54, 145–173.
 - http://doi.org/10.1146/annurev.psych.54.101601.145121
- Silk, J. B., Seyfarth, R. M., & Cheney, D. L. (2016). Strategic use of affiliative vocalizations by wild female baboons. *PLoS ONE*, *11*(10), e0163978. http://doi.org/10.1371/journal.pone.0163978
- Wheeler, B. C., & Fischer, J. (2012). Functionally referential signals: A promising paradigm whose time has passed. *Evolutionary Anthropology*, *21*, 195–205.
- Zuberbühler, K. (2008). Audience effects. Current Biology, 18(5), R189-190.