The combined impact of professional role identity and public service motivation on
decision-making in dilemma situations

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Online appendix Table OA1-OA3

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Abstract

Working in the public sectors implies the need to make decisions in the face of dilemmas. As consistent decision-making is highly desirable for organizational performance the question raises: where do public service professionals based their decisions on? This study aims to increase our understanding of whether public service motivation and professional role identity are useful concepts by which to predict what decisions public service professionals will make in complex situations. Using survey data, this research investigates the impact of these two concepts on the decision-making of veterinary inspectors working at the Dutch Food and Consumer Product Safety Authority. The results support the hypothesis that decision-making is influenced by the

way veterinary inspectors interpret their professional role. PSM, in contrast, seems to have neither a direct nor a moderating effect on decision-making in the context of dilemma situations.

Points for practitioners

Two important conclusions of this study are of interest for managers working with professionals. Our findings should urge them to consider the different views employees have about their job when teams are formed or when specific combinations of tasks are assigned. For example, attention should be paid to the question which mixture of professional role identities is most suitable to accomplish organizational objectives. Second, the construct of PSM can be used by Human Resource managers to assess whether public professionals are motivated to provide public services. However, the results also indicate that the operationalization of PSM needs to be adapted to the professional context of public service providers.

Keywords: Contextualization, decision-making, professionalism/professional role identity, public service motivation

Introduction

Working in the specific context of public governance entails a regular need to take decisions in the face of dilemmas (De Graaf et al., 2014). Public organizations are challenged to balance ‘traditional’ governmental values such as integrity, neutrality and legality with ‘business-like’ values such as efficiency, responsiveness and effectiveness. The problem seems to be that there is no overriding ‘good’ or ‘common’ scale ranking the importance of these values (Van der Wal et al. 2011); a condition that in moral philosophy is called *value pluralism* (Wagenaar, 1999). Also, public servants have to deal with a great number of stakeholders each having their own requests for public services. Borrowing Hardy’s words (1981) “most administrative practice [...] is a compromise between conflicting values and forces within society” (p. vii.) which often leads to deviant behaviour because pressures overwhelm individuals (Van der Wal et al. 2011).

Because equality before the law is a core value in the public sector (Rainey, 2003), variation in the decision-making of public service professionals, provided the

context is similar, must be prevented. A deeper insight into what drives the decision-making of individuals in dilemma situations is necessary because it can help to anticipate and adjust unwanted decision-making.

Professional role identity (PRI), i.e., the perception individuals bring to their professional role, and *public service motivation* (PSM), or “an individual’s orientation to delivering services to people with a purpose to do good for others and society” (Perry and Hondeghem, 2008, p. vii), seem promising concepts by which to identify predictable links between what drives employees and outcomes variables. The aim of this study is to increase our knowledge of which role these two concepts together play in the decision-making of public service professionals facing dilemma situations.

To reach this aim, this study uses insights from *identity theory*. A central argument of this theory is that individuals “engage in activities that correspond in meaning to the meaning of their identity” (Burke and Stets, p.188). Regarding the concept of PRI this implies that individuals act in ways that are consistent with the perceptions they bring to their professional role. Individuals scoring high on PSM are expected to perform well because they perceive their work as meaningful (Perry and Wise, 1990; Wright and Grant, 2010). A limitation, however, is that our knowledge about the impact of PSM on actual behaviour is limited (Andersen and Serritzlew 2009) and we cannot be sure how individuals act in the context of dilemma situations (Schott et al., 2014). How will a public service motivated individual decide if safeguarding

safety implies trading-off transparency? By using insights from *identity theory* we will provide a line of reasoning that is clearer about the consequences of PSM in the context of dilemmas than traditional approaches.

This study has several contributions. First, we contribute to the literature on professionals by investigating how they view their professional role and how this relates to decision-making. Second, we research the effect of PSM within a specific context: in dilemma situations. Insights from identity theory are used to present a line of reasoning that is useful to study the consequences of both PSM and PRI in this specific context. Finally, this study contributes to the recent debate (Giauque et al., 2011; Liu, et al. 2008) on the universal applicability of the PSM scale by testing it within the case of Dutch veterinary inspectors.

Theoretical framework

This section summarizes research on professionals (at an occupational and individual level) and PSM as these two concepts seem useful to learn more about the question why individuals make certain decisions in the context of dilemma situations.

Professionals' behaviour has been studied in the field of sociology for a long time (sociology of professionalism), but is also central to public administration literature. Some public administration scholars focus on individuals, measure their

identification with the profession und investigate how this relates to other concepts (e.g., Perry, 1997; DeHart-Davis, et al., 2006). Others view individuals as belonging to different occupations with varying levels of professionalism. For example, Andersen and Pedersen (2012) point out that “the level of specialized theoretical knowledge combined with the existence of firm intro-occupational norms” (p. 48) – affects the behaviour and performance of all individuals belonging to a certain occupation. Recently, we see research on professionals focussing on transformations. Emery et al. (2014), for example, investigated changes in the professional profile of Swiss federal administrative elites through indicators such as academic and social capital and career path. Buffat (2014) showed that organizational hybridization affects professionals’ professional identities: they also become hybrid. Noordegraaf (2013) argued that increasingly dependent and fragmented professional fields might be required to look for new forms of control and new understandings of what public professionalism means.

Research approaching professionals at an individual level shows that the behaviour of professionals is influenced by more than one set of overarching professional norms. For example, Selden et al. (1999, p. 172) noted that “popular stereotypes and scholarly depictions do not provide a clear understanding of how public administrators perceive their roles and responsibilities or how they use their considerable discretionary power”. Using Q-methodology, De Graaf (2011) identified different types of public top administrators depending on the way they weigh their

loyalties to their different masters and points out that these typologies “indicate how administrators behave and make decisions” (p. 285). This is in line with research by Tickle (1999) who found that teachers’ perceptions of their professional identity influence their judgements and behaviour, and with the work of Goldstein (1977) who argues that “officers’ responses in certain situations are derived from their perceptions about what policing means”.

We suggest identity theory as a theory that can explain why individuals with the same occupational background may take different decisions in practice. It explains differences in decision-making by making use of the self and the context as explanatory variables. According to Stryker and Burke (2000), the self can be seen as a multi-dimensional construct consisting of a collection of role identities; each being based on the occupation of a particular role in social intercourse. *Role identities* are ‘self-conceptions, self-referent cognitions, or self-definitions that people apply to themselves as a consequence of the structural role positions they occupy’ (Hogg et al., 1995:256). By taking on a role identity, individuals accept certain self-meaning and expectations accompanying the role, and then behave to preserve and represent these expectations and meanings (Stets and Burke (2000)). By researching how individuals give meaning to their professional role, we learn more about how the professional interprets his or her professional role and which decision-making may be expected in dilemma situations. This leads to the first hypothesis:

H1: Decision-making in dilemma situations is influenced by professional role identity, i.e. the way individuals interpret their professional role.

Since Perry and Wise (1990) provided the first definition of PSM – PSM is ‘a predisposition to respond to motives grounded primarily or uniquely in public organizations’ (p. 368) – several different definitions of PSM have been published (see e.g., Brewer and Selden, 1998; Perry and Wise, 1990; Rainey and Steinbauer, 1999). Central to all definitions is that PSM is associated with serving the community and/or providing ‘meaningful public service’. Put differently, PSM can be described as a personal commitment towards the public interest (Schott et al. 2014). Similarly, Vandenabeele (2008) describes PSM as “the motivation (of civil servants) to contribute to the public interest in a disinterested way” (p. 15), implying that the public interest is an integral aspect of PSM.

A large body of research exists treating PSM as predictor of positive outcome variables (e.g., Wright and Pandey, 2008; Leisink and Steijn, 2009; Vandenabeele, 2009) on the basis of the assumption that public service motivated individuals perform well, since they are working to provide services they perceive as meaningful (Perry and Wise, 1990; Wright and Grant, 2010). Another line of research focuses on the antecedents of PSM (e.g., Giauque et al., 2013; Schott and Pronk, 2014). Recently, scholars questioned the conceptualisation and applicability of PSM in diverse contexts.

Liu et al. (2008), for example, found evidence that the generalizability of PSM observed in the Anglo-Saxon culture and context is limited when it comes to China. Giauque et al. (2011) found similar results and call for a conceptualization of PSM taking into account the institutional characteristics of the individuals under study.

Despite this large body of PSM research, however, we do not know how individuals actually put their PSM into practice if they are confronted with complex real-live situations that force them to make trade-offs (Schott et al., 2014). Schott et al. (2014) argue that this is related to the central aspect of PSM, namely the ‘public interest’, being a very elusive concept and suggest that it is necessary to supplement PSM with other theories that provide clearer insight into the meaning of the public interest for an individual. Following up on this, we combine the concept of PSM with the concept of PRI. As mentioned before, the public interest and PSM are highly interrelated concepts. We expect that a high level of PSM will drive individuals to decisions that are consistent with their interpretation of what it means to serve the public interest in their professional role. Individuals who score low on PSM, in contrast, will more easily adhere to a pragmatic solution that might involve trading off their personal interpretation of the public interest. This leads us to the second hypothesis.

H2: PSM moderates the relationship between professional role perception and decision-making.

Methodology

Sample and Procedure

In the summer of 2013, a web-based questionnaire was distributed to all veterinary inspectors working at the division Veterinary and Import of the Dutch Food and Consumer Safety Authority (NVWA). This group of professionals is considered ideal subject for research into the role of PSM and PRI in the context of dilemma situations, because they work in a demanding setting, involving face-to-face interactions with different types of inspectees who have strong economic interests. Their primary task is to enforce European law, national law and rules set by the organization directed at safeguarding public health, animal health and animal welfare. As these different aspects of their work are not always compatible, they are frequently confronted with dilemma situations. All veterinary inspectors belong to the profession of veterinarians. In total, 403 employees were addressed, 258 of whom returned useful questionnaires (67 %), which yielded a total response of 64% (N=258).

Following common practice (Pandey and Stazyk, 2008) the following three socio-demographic characteristics were included as control variables: *position*, *age*, and *gender*. We also controlled for *tenure*, *additional employment* contract (yes or no), *type*

of employment contract (practitioners or ‘regular’ veterinary inspector), and *team* (living animal, abattoirs, or import) because these control variables provide specific characteristics of the case. Finally, *proactive personality*¹ was included because in sociological literature this concept is commonly associated with successful adoption of organizational values (Ashford and Black, 1995).

Sixty-three per cent of the respondents were male and 37 % female. More than 50% of the respondents held the position of veterinary inspector without managerial responsibilities. The largest age group was between 55 and 65 years old (36%), and had worked at the NVWA for between 5 and 10 years (40%). Only 10 % of the sample were younger than 35 years. Sixty-five per cent had an employment contract as a ‘regular’ veterinary inspector, 33% worked as practitioners on call, and 32% of the sample were also employed as veterinarians in private practice.

Statistical technique

In order to test the hypotheses *logistic regression analyses* were performed. A logit model is necessary because the independent variable – decision-making – is categorical, which means that the general assumption of linearity in linear regression models between the independent and dependent variables is violated. By expressing the linear regression equation in logarithmic terms, logistic regression analysis avoids the

¹ The concept of proactive personality was measured by a 4-item scale developed by Parker and Sprigg (1999), which is based on Bateman and Crant’s 17-item Proactive Personality Scale (1993).

problems associated with violating the assumption of linearity. The relationship between the independent and the outcome variables is expressed as an odds ratio (OR), which is the estimated increase in the logit of the outcomes variable associated with a one-unit increase in the predictor variable.

Measures

In the online Appendix (Table OA1), a complete list of all items used in this study can be found. All items were measured on a five-point Likert scale (ranging from ‘agree’ to ‘disagree’). In order to deal with construct validity, two factor analytic methods are performed. Principal component analysis (PCA) is used to assess the construct validity of the instrument measuring PRI because it is newly developed and confirmatory factor analysis (CFA) to assess the construct validity of the highly theory-driven PSM instrument.

Public service motivation is measured by a 15-items version of the Kim et al. (2013) scale. In a pilot test, however, one item of the dimension ‘self-sacrifice’ was found to cause confusion among the respondents (PSM_SS2). This item was excluded from the follow-up survey. Neither of the CFA fit indices on our measurement of PSM met the required threshold. For this reason, two additional items (PSM_APS_4, PSM_COM_2) with low factor loadings were also excluded. As a result, both fit indices increased, which indicates that the adjusted PSM model can be considered better

suitable (Table 1) and that the modified PSM measurement instruments had good construct validity. Cronbach's α was good acceptable for both the overarching concept of PSM ($\alpha = .83$) and three out of its four separate dimensions. Only the dimension 'commitment to public values' scored low ($\alpha = .56$).²

INSERT TABLE 1 ABOUT HERE

To our knowledge, there is no measurement instrument which records the interpretations that individuals bring to their professional role as veterinary inspectors. To this end, we developed a new instrument to measure the concept of *professional role identity*. Following research using identity theory (Chenung 2008; Stets and Burk, 2005), we developed an 11-item scale. Respondents were asked to think of themselves in their position as veterinary inspectors and prompted to identify where they would place themselves between bipolar statements measuring four different aspects of the professional role of veterinary inspectors. These aspects – which were derived from the findings of a qualitative prestudy (38 interviews with the same group of respondents) – are: commitment to economic interest, commitment to animal welfare, commitment to public health, and strict rule enforcement. *Strict rule enforcement* was used to assess if veterinary inspectors were willing to enforce rules and regulations in each and every

² We return to problems related to low α in the Discussion

situation, or if they considered generating rule compliance a superior method. The remaining dimensions measured which interest(s) veterinary inspectors find important to promote in their work: *economic interest*, *animal welfare*, or *public health*. In Table 2, the results of the PCA are summarized indicating that the factors approximately correspond to the expected interpretations aspects of professional identity. All factor loadings exceeded .4: they ranked between .439 and .805. The reliability scores for the separate dimensions of PRI were rather low, especially for ‘commitment to economic interest’. Further investigation of the two items measuring this dimension showed that together they form a cumulative scale instead of a scale of correlated items. In other words, finding it difficult to enforce rules if this triggers serious financial damage to inspectees was a precondition for deviating from the rules. Embretson and Reise (2000) point out that cumulative scales cannot be assessed by Cronbach’s α , but should be analysed via nonparametric item-response theory for polychromatic items. The scale of the dimension ‘commitment to economic interest’ had a homogeneity of $H = 0.34$, which according to Van Schuurman (2003) is acceptable. For this reason, we combined ECO1 and ECO2 and used their sum score to measure the professional role identity dimension ‘commitment to economic interest’.

INSERT TABLE 2 ABOUT HERE

Following research on ethical decision-making (e.g., Maesschalck, 2004), we measured *decision-making in dilemma situations* by confronting respondents with hypothetical dilemmas and asked them how they would act in these situations. This means, decision-making items measure the hypothetical decisions respondents would take when being confronted with situations of conflicting demands while professional role identity items measure how veterinary inspectors perceive their professional role. The dilemmas have been developed by the researchers and were based on aforementioned qualitative study, meaning that they were highly realistic and presented real-life problems frequently encountered by veterinary inspectors. The aim was to develop dilemmas in which the three core values of veterinary inspectors – *public health, animal health/welfare, and economic interest* – were in conflict with each other. For the two dilemmas – presented below – respondents could choose between a response category that allowed them to safeguard one of the values that were in conflict or to go for an interim solution.

Dilemma1

An employee of an abattoir calls you in the afternoon about a post-mortem inspection. It turns out that one of your colleagues overslept this morning. The stable hand has already started the slaughtering, without waiting for a veterinary inspector to arrive for the ante-mortem inspection. You are a little surprised because usually this abattoir sticks to the rules. By the time you arrive at the abattoir, 15 heads of cattle have been slaughtered without ante-mortem inspection. What are you going to do?

- 1) I certify the cattle.
- 2) I disqualify the cattle.
- 3) I defer the decision until I have talked to my supervisor.
- 4) Something else, namely...

Dilemma 2

At an abattoir a cow is unloaded. You suspect that the information about the animal's vaccinations is not reported correctly. Next to this, it turns out that one of the cow's paws is fractured. The truck driver explains that the fracture must have happened on the way to the abattoir, but it is not clear by just looking at the animal if this is true. What are you going to do?

- 1) I allow the cow to be shot and slaughtered.
- 2) I order the cow to be shot and disqualify it.
- 3) I order the cow to be shot and slaughtered and try to predate the fracture so that I can act if necessary.
- 4) I order the cow to be shot and slaughtered and defer my decision until I receive the additional vaccination information I required.
- 5) I defer the decision until I have talked to my supervisor
- 6) Something else, namely...

Findings

Descriptive statistics of variables under study

Table 3 provided evidence of a veterinary inspectors being highly public service motivated. The same applies for three out of the four PSM dimensions. Only the dimension ‘self-sacrifice’ scored slightly under 3.5 (3 is the centre of the scale). The standard deviation varied from .40 to .61, which indicates a low variation in the responses to the items measuring PSM. The descriptive statistics for the different dimensions of the construct *professional role identity* were varied and the standard deviations for the different dimensions were relatively large (see Table 3). This supports the idea that veterinary inspectors differ in the way they perceive their professional role. Table 3 also provided the frequencies for the variable ‘decision-making’. First, the last response category had to be coded (‘Something else, namely ...’). If the answer was in line with one of the existing response categories, it was coded accordingly. Answers that could not be assigned to an existing response category were either combined into a new response category or – if only mentioned once – coded as ‘missing’ because for the statistical analysis, only those response categories which contained more than ten reactions can be used (Hosmer and Lemeshow, 2000). We found a great variation in *types* of response categories chosen across all three dilemmas, whereas the *frequency* of

each category varied for each dilemma. This indicates that veterinary inspectors have discretion to make their own decisions.

Testing Hypotheses

H1 – decision-making is influenced by professional role identity – was tested using a two-step procedure. First, the effect of each dimension of PRI on decision-making was tested separately. Second, controls were included in the logit models.

Table 4 summarizes the results of the binary regression analysis applied to Dilemma 1. Next to the logistic regression coefficients (B) and the odds ratio (Exp(B)), the results of the Hosmer-Lemeshow (HL) test, the Omnibus the Nagelkerke R Square, and the number of valid observations are provided. The HL test and the (pseudo) R Square indicate the extent to which the ‘new model’ provides better fit than the ‘null model’ without explaining variable(s). Even though opinions differ, some scholars argue that the Nagelkerke R Square can be used as an indicator of the percentage of variance explained (Lammers et al., 2007).

The logit models showed that the dimensions ‘commitment to animal welfare’, ‘commitment to public health’ and ‘strict rule enforcement’ had no significant effect on decision-making. A one-unit change in the independent variables ‘commitment to economic interest’, however, increased the likelihood that the respondent decided to defer the decision and talk to the supervisor first. This means that, if veterinary

inspectors saw considering the economic interest as an important aspect of their work, the probability increased that they deferred their decision until they had talked to their supervisor.

In a next step we included the control variables in the analysis in order to control for alternative explanations of decision-making. The results of this second model showed that the effect of ‘commitment to economic interest’ remained significant ($\text{Exp}(B) = 1.635$; $p = .017 < .05$). The control variables which had a significant effect on decision-making in Dilemma 1 were gender. Women were three times more likely than men ($\text{Exp}(B) = 3.009$) to defer their decision and contact the supervisor first than disqualifying the cattle.

INSERT TABLE 4 ABOUT HERE

In Tables 5 the results of the multinomial regression analyses are summarized for Dilemmas 2. The results of the Likelihood Ratio Test – indicating whether the ‘new model’ can be considered to have a good fit – the logits, odds ratios, the Nagelkerke (pseudo) R, and the number of valid observations are provided.

The logit model shows that the dimension ‘commitment to public health’ had a significant effect on decision-making. If individuals viewed safeguarding public health as an important aspect of their work, the probability decreased that they slaughtered the

cow and tried to predate the exact date of the fracture rather than ‘slaughtering and disqualifying the animal’. The same was true for the response category ‘I order to shoot and slaughter the cow and make my decision on the basis of the additionally inquired vaccination information’. Thus, if respondents scored higher on ‘commitment to public health’, they were more likely to slaughter and disqualify the animal right away.

Including controls to the analysis showed that the finding is not confounded by third variables. Controls with a significant effect were ‘type of employment contract’ and ‘team’. Compared to practitioners, ‘regular’ veterinary inspectors were eight times more likely to choose the response category ‘I order to shoot and slaughter the cow and try to assess the fracture’s date so I can maintain order if necessary AND make my decision on the basis of the additionally inquired vaccination information’ compared to ‘I order to slaughter and disqualify the cow’ than practitioners’ ($\text{Exp(B)} = 8.068$). Individuals of the team ‘slaughtering houses’ were 30 ($\text{Exp(B)} = 30.428$) times more likely to slaughter the cow and to try predate the exact date of the fracture than members of the team ‘import’.

INSERT TABLE 5 ABOUT HERE

Overall, the results provide some support for H1. They show show that the way individuals interpret their professional role has a significant effect on decision-making

even after controlling for a large number of variables. In the two dilemmas researched in this study, the effects of ‘commitment to economic interest’ and ‘commitment to public health’ were significant. However, the results also indicate that the influence of these variables is limited. The effect sizes expressed in odds ratios show that their impact is much smaller if being compared to the effects of some of the controls: they rank between 1.4 and 1.9 while odd ratios of some controls are much higher. This is also reflected in the small Nagelkerke R Square of the logit models.

H2 – PSM moderates the relationship between professional role perception and decision-making in dilemma situations – was tested by including PSM as a moderator in the logit models discussed above. The results can be found in the online Appendix. Table AO1 lists the results of the moderator analyses applied to the relationship between the PRI dimensions and decision-making that was found to be significant in the previous analyses for Dilemma 1. Table AO2 does the same for Dilemma 2.

Interestingly, the results failed to provide any support for H2. PSM did not moderate the relationship between PRI and decision-making in the two dilemma situations included in this study. This was true for both the dimensions of PRI that had a significant effect on decision-making in previous analyses and the dimensions that did not have significant effects.

Finally, we also investigated whether PSM had a direct effect on decision-making in dilemma situations. The results of testing this effect can be found in the logistic regression models in the previous section. In none of the dilemmas investigated in this study did PSM have a significant effect on decision-making.

Discussion

PSM among veterinary inspectors and their professional role identities

The results of this study indicate that veterinary inspectors differ in the way they perceive their professional role: some oppose ‘strict rule enforcement’ as an important aspect of their work, others think about it in a neutral way. This finding shows some interesting parallels with the research by De Graaf (2005), who was able to identify four discourses of farm animal veterinarians’ conceptualizations of animals and their owners. Empirical evidence for the existence of different professional role identities is highly interesting, because it challenges the fundamental assumption in the sociology of professionalism that professionals with the same occupational background share one single professional identity and act accordingly (e.g., Andersen and Pedersen, 2014).

Applying the measurement of PSM, all four dimensions of PSM could be reproduced and the reliability scores of all dimensions were acceptable, implying that the concept of PSM is a valid one in the context of Dutch veterinary inspectors.

However, there are some restrictions related to this conclusion which have to be pointed out. As mentioned above, on the basis of a pilot study and the results of the CFA, three items out of three different dimensions had to be excluded from further analysis. This can be interpreted as an indication for the necessity to ensure that the formulation of the items is suitable for the professional context. Veterinary inspectors are very down-to-earth and pragmatic, which might explain why they find it difficult to identify with items that contain woolly phrases such as ‘the common good (PSM_ATPS4)’ and ‘civic duty (PSM_SS4)’. We have therefore, come to a similar conclusion as Giauque et al. (2011) and Liu et al. (2008): PSM is not a universal concept but – in particular the professional context – should also be considered when PSM is studied. Depending on which values, norms, and language are common within professional institutions, conceptualizations of PSM could vary. This finding indicates that the case of veterinary inspectors is interesting because this group of professionals to learn more about the universal applicability of the PSM scale within specific professional settings.

Professional role identity and decision-making

We also investigated whether the different views professionals have about their role are reflected in the decisions they make decision-making by testing H1. The results provided some support for the hypothesis *that decision-making in dilemma situations is influenced by PRI*. The dimension ‘commitment to economic interest’ influenced the

decision “I defer the decision until I talked to my supervisor” in Dilemmas 1. Individuals who scored high on this PRI dimension were more likely to defer their decision than to choose a response category implying immediate and negative consequences for the inspectee. This means, even though veterinarian inspectors seem to vary with regard to the decisions they make, no statistically relevant number of respondents crossed the line and said they had acted against the organizational objectives and values and regulations: they did not show deviant workplace decision-making. Rather, they deferred their decision to a supervisor. At this point, strong conclusions are premature. However, it can be argued that they possibly deferred the decisions to find other ways to act for the benefit of the individuals they were inspecting.

In Dilemma 2, the dimension ‘commitment to public health’ had a significant effect on decision-making. Individuals who thought that fostering public health was an important aspect of their professional role were less likely to do additional medical research or to wait for additional information about the vaccination history of the animal than to disqualify the animal from the production process immediately. We carefully argue that the results give rise to the assumption that individuals who focus on public health in their work are very strict in avoiding any potential threat to public health.

The dimensions ‘strict rule enforcement’ and ‘commitment to animal welfare’ were not found to have a significant impact on decision-making in any of the three

dilemma situations investigated here. How can these non-findings be explained? We return to this question when discussing the limitations of this study.

Attention should also be paid to the low statistical power of the models testing H1, implying that a significant amount of variation remains unexplained. Thus, next to PRI there must be other important factors that have not been included in the conceptual model that can better (?) predict why individuals make certain decisions in dilemma situations. An explanation for the low percentage of variance explained is provided by the principles of *identity salience* known from identity theory. The central argument of this principle is that depending on the relative levels of an individual's commitment to different role identities they hold, the role identities are positioned differently within the identity hierarchy. From the basic assumption that salient identities are likely to be activated frequently across different situations (Burke and Stets, 2009) we might argue that a different role identity than the PRI of veterinary inspectors is positioned highest in the identity hierarchy, and hence more frequently played out in dilemma situations..

PSM and decision-making

The results provided no evidence for H2 claiming that *PSM moderates the relationship between the way individuals interpret their professional role and the decisions they make in dilemma situations*. The results also showed that PSM did not have a direct effect on decision-making in the context of dilemmas either. This provided support the

critique by Schott et al. (2014) that it is not enough to know the strength of PSM if we want to predict how an individual will behave in the context of dilemma situations.

A possible explanation for why the expected interaction effect of PSM could not be found in the data might be the low statistical power mentioned earlier. Given that the sample size on which the results of this study were based was limited, it is difficult to find significant effects. Besides, we did not ask explicitly how respondents interpreted their task of serving the public interest from the point of view of a veterinary inspector. It might be argued that veterinary inspectors interpret this task differently – not as safeguarding the values animal welfare, public health, economic interest, and strict enforcement – and that therefore no interaction effect of PSM could be found.

Limitations

Some limitations of the current study should be pointed out. Because of the cross-sectional character of the data, there might be problems related to causal inference such as reversed causality and/or confounding variables. Some scholars are also sceptical about measuring both the independent and the dependent variable on the basis of just one source (e.g., Favero and Bullock, 2015), since findings might be distorted by *common method bias* (CMB). Other scholars claim that the risk of CMB is overestimated (Lance et al., 2010). Nevertheless, we put the dependent and independent

variables in distant parts of the questionnaire to reduce the risk of respondents cognitively combining the independent and dependent variable, which might trigger a CMB-biased pattern of responses.

The fact that the results are based on self-reported data provides another limitations to this study. The scores for self-reported decision-making might be biased by socially desirable answers, and hence deviate from actual behaviour. Future research would benefit from relying on more objective data sources such registered reflecting decisions that have actually been made by public service professionals rather than asking individuals how they would decide in a hypothetical dilemma situation.

Another limitation is the low Cronbach's α of the variable PRI and the small sample size, implying low statistical power (De Vellis, 2003). This might explain some of the non-findings of this study: why the professional role dimensions 'commitment to animal welfare' and 'strict rule enforcement' had no effect on decision-making and why no moderator effect of PSM was found. However, as the entire research population (all veterinary inspectors in the Netherlands) only contains 403 individuals a large-N study was impossible. Also, we think that we were justified in using the variable PRI because 1) the principal component analysis we performed supports the idea that the items of the scale can be clustered in four different dimensions, and 2) Cronbach's α reliability coefficient depends on the number of items which measure a concept (Dooley, 2001) and the separate dimensions were addressed by only two or three items.

Conclusions

Several conclusions can be drawn based on the results of this study. Including the concept of *professional role identity* into the study of decision-making in the context of dilemma situations is useful to learn more about what drives public service professionals' decision-making. Next, the results provide insights into the effect of PSM in this context. They suggest that PSM has no explanatory value of decision-making in situations in which values are conflicting. This findings support the argument made earlier by Schott et al. (2014) that – especially in the context of dilemma situations – PSM alone is not sufficient to explain how individuals will act. The results of this study also indicate that the measurement instrument of PSM might not be universally applicable to individuals belonging to specific professions. Several items had to be excluded from the statistical analysis because of the results of a pilot study and the CFA. Finally, and against expectations, PSM did moderate the relationship between PRI and decision-making. Next to the concluding remarks, the results of this study also indicate that the relationship between PSM, PRI and decision-making has not yet been fully analysed. We hope that future research will tackle the aforementioned limitations of this study by, for example, developing the instrument measuring professional role identities further. This will enable scholars to make stronger claims regarding the relatedness of the key concepts of this study.

References

- Andersen LB (2009) What determines the behaviour and performance of health professionals? Public service motivation, professional norms and/or economic incentives. *International Review of Administrative Sciences* 75(1): 79-97.
- Andersen LB and Pedersen LH (2012) Public service motivation and professionalism. *International Journal of Public Administration* 35(1): 46-57.
- Andersen LB and Serritzlew S (2012) Does public service motivation affect the behaviour of professionals? *International Journal of Public Administration* 35(1): 19-29.
- Ashford SJ and Black JS (1996) Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology* 81(2): 199-214.
- Brewer GA and Selden SC (1998) Whistle blowers in the federal civil service: New evidence of the public service ethic. *Journal of Public Administration Research and Theory* 8(3): 413-439.
- Buffat A (2014) Public on the outside, private on the inside: The organizational hybridization, sense of belonging and identity strategies of the employees of a public unemployment insurance fund in Switzerland. *International Review of Administrative Sciences* 80(1): 70-88.
- Burke PJ Stets JE (2009) *Identity Theory*. Oxford: Oxford University Press.

- Cheung HY (2008) Measuring the professional identity of Hong Kong in-service teachers. *Journal of In-service Education* 34(3), 375-390.
- De Graaf G (2005) Veterinaris's discourse on animals and clients. *Journal of Agriculture and Environmental Ethics* 18(6): 557-78.
- De Graaf G (2011) The loyalties of top public administrators. *Journal of Public Administration Research and Theory* 21(2): 285-306.
- De Graaf G Huberts L and Smulders R (2014) Coping with public value conflicts. *Administration & Society*. Epub ahead of print 29 April 2014. DOI: 10.1177/0095399714532273.
- DeHart-Davis L Marlowe J and Pandey SK (2006) Gender dimensions of public service motivation. *Public Administration Review* 66(6): 873-887.
- DeVellis RF (2003) *Scale development: Theory and applications*. *Applied social research methods series*. London: SAGE.
- Dooley D (2001) *Social research methods*, 4th ed. New Jersey: Prentice Hall.
- Embretson SE and Reise PS (2000) *Item response theory for psychologists*. Mahwah, NJ: Lawrence Erlbaum Publishers.
- Emery Y Giaque D and Rebmann F (2014) The slow transformation of Swiss federal administrative elites. *International Review of Administrative Sciences* 80(4) 687-708.
- Favero N and Bullock JB (2015) How (not) to solve the problem: An evaluation of

- scholarly responses to common source bias. *Journal of Public Administration Research and Theory* 25(1): 285-308.
- Giaugue D, Anderfuhren-Biget S and Varone F (2013) HRM practices, intrinsic motivators and organizational performance in the public sector. *Personnel Management* 42(2): 123-150.
- Giaugue D, Ritz A, Anderfuhren-Biget S, Varone F and Waldner C (2011) Putting public service motivation into context: A balance between universalism and particularism. *International Review of Administrative Science* 77(2): 227-53.
- Goldstein H (1977) *Policing a Free Society*. Cambridge, MA: Ballinger.
- Hardy J (1981) *Values in social policy: 9 contradictions*. London: Routledge & Kegan Paul Ltd.
- Hogg MA, Terry DJ and White KM (1995) A tale of two theories: A critical comparison of identity theory and social identity theory. *Social Psychology Quarterly* 58(4): 255-69.
- Hosmer DW and Lemeshow S (2000) *Applied Logistic Regression*, 2nd ed. New York: John Wiley and Sons, Inc.
- Kim S, Vandenabeele W, Wright BE, Andersen LB, Cerase FP, Christensen RK, Desmarais C, Koumenta M, Leisink P, Liu B, Palidauskaite J, Pedersen LH, Perry JL, Ritz A, Taylor J, De Vivi P (2013) Investigating the structure and meaning of public service motivation across populations: Developing an

- international instrument and addressing issues of measurement invariance. *Journal of Public Administration Research and Theory* 23(1): 79-102.
- Lammers J, Pelzer B, Hendrickx J and Eisinga R (2007) *Categorische data analyse met SPSS*. Assen: Uitgeverij Van Gorcum.
- Lance CE, Dawson B, Birkelbach D and Hoffman BJ (2010) Method effects, measurement error, and substantive conclusions. *Organizational Research Methods* 13(3): 435-455.
- Leisink P and Steijn B (2009) Public service motivation and job performance of public sector employees in the Netherlands. *International Review of Administrative Science* 75(1): 35-51.
- Liu B, Tang N and Zhu X (2008) Public service motivation and job satisfaction in China. *International Journal of Manpower* 29(8): 684–699.
- Maesschalck J (2004) The impact of new public management reforms on public servants' ethics: Towards a theory. *Public Administration* 82(2): 465-489.
- Noordegraaf M (2013) Reconfiguring professional work: Changing forms of professionalism in public services. *Administration & Society*. Epub ahead of print 6 November 2013. DOI: 10.1177/0095399713509242.
- Pandey SK and Stazyk E (2008) Antecedents and correlates of public service motivation. In: Perry JL and Hondeghem A (eds) *Motivation in public*

- management: The call of public service*. Oxford: Oxford University Press, pp.101-117.
- Perry JL (1997) Antecedents of public service motivation. *Journal of Public Administration Research and Theory* 7(2): 181-87.
- Perry JL and Wise LR (1990) The motivational bases of public service. *Public Administration Review* 50: 367-373.
- Perry JL and Hondeghem A (2008) *Motivation in public management: The call of public service*. Oxford: Oxford University Press.
- Rainey HG (2003) *Understanding and managing public organizations*. San Francisco, CA: Jossey-Bass.
- Rainey HG and Steinbauer PJ (1999) Galloping elephants: Developing elements of a theory of effective government organizations. *Journal of Public Administration Research and Theory* 9(1): 1-32.
- Schott C and Pronk JLJ (2014) Investigating and explaining the organizational antecedents of PSM. *Evidence-based HRM: A Global Forum for Empirical Scholarship* 2(1): 28-56.
- Schott C, Van Kleef DD and Steen T (2014) What does it mean and imply to be public service motivated? *The American Review of Public Administration*. Epub ahead of print 16 May 2014. DOI: 10.1177/0275074014533589.
- Selden SC, Brewer GA and Brudney JL (1999) Reconciling competing values in

public administration understanding the administrative role concept.

Administration & Society 31(2): 171-204.

Stets JE and Burke PJ (2000) Identity theory and social identity theory. *Social*

Psychology Quarterly 63(3): 224-37.

Stets JE and Burke PJ (2005) Identity-verification, control, and aggression in marriage.

Social Psychology Quarterly 68(2): 160-78.

Stryker S and Burke PJ (2000) The past, present, and future of an identity theory. *Social*

Psychology Quarterly 63(4): 284-97.

Tickle L (1999) Teacher self-appraisal and appraisal of self. In Lipka RP and Brinthaupt

TM (eds) *The role of self in teacher development*. Albany, NY: State University of New York Press, 121–141.

Vandenabeele W (2008). *Towards a public administration theory of public service*

motivation. PhD Thesis, Katholic University of Leuven, Belgium.

Vandenabeele W (2009) The mediating effect of job satisfaction and organizational

commitment on self-reported performance: More robust evidence of the PSM-performance relationship. *International Review of Administrative Science* 71(1): 11-32.

Vandenabeele W, Scheepers S and Hondeghem A (2006) Public service motivation in

an international comparative perspective: The UK and Germany. *Public Policy and Administration* 21(1): 13-32.

- Van Schuur H and Wijbrandt (2003) Mokken scale analysis: Between the Guttman scale and parametric item response theory. *Political Analysis* 11(2):139–6.
- Van der Wal Z, De Graaf G and Lawton A (2011) Competing values in public management: Introduction to the symposium issue. *Public Management Review* 12(3), 331-341.
- Wagenaar H (1999) Value pluralism in public administration. *Administrative Theory and Praxis* 21(4): 443–449.
- Wright BE and Pandey SK (2008) Public service motivation and the assumption of a person-organization fit: Testing the mediating effect of value congruence. *Administration and Society* 40(5): 502-521.
- Wright BE and Grant AM (2010) Unanswered questions about public service motivation: Designing research to address key issues of emergence and effects. *Public Administration Review* 70(5): 691-700.

Appendix

Table 1 Summary fit indices CFA

	CFI	RMSEA
PSM (original model)	.923	.121
PSM (modified model)	.954	.076
Cut-off criteria	>.95	<.08

Table 2 Results of PCA

	Factor			
	1	2	3	4
Eco1	-.476	-.041	.036	.628
Eco2	-.514	-.039	-.078	.606
AW1	-.307	.318	.439	-.017
AW2	-.098	.393	.703	-.190
AW3	-.262	.551	.534	.106
PH1	-.094	.758	-.319	.046
PH2	.030	.540	-.569	.092
PH3	-.047	.549	-.383	-.230
Enforement1	.807	.039	.112	.126
Enforcement 2	.749	.148	.107	.351
Enforcement 3	.885	.205	.135	.271

Rotation: Varimax

Table 3 Descriptive statistics of concepts under study

	No of items	Cronbach's α	Mean	SD	No	%
PSM	12	.83	3.78	.40		
Attraction to public service	3	.58	3.84	.48		
Commitment to public values	3	.56	4.18	.40		
Compassion	3	.60	3.37	.51		
Self-sacrifice	3	.62	3.37	.61		
Professional role identity	11	.64	3.26	.38		
Commitment to economic interest	2	.48 ³	2.46	.67		
Commitment to animal welfare	3	.60	3.32	.66		
Commitment to public health	3	.61	3.60	.62		
Strict rule enforcement	3	.66	2.33	.66		
Decision-making						
Dilemma 1						
I disqualify the cattle					128	50
I defer the decision until I have talked to my supervisor					98	38
Missing					32	12
Dilemma 2						
I order the cow to be shot and slaughtered and try to predate the fracture so that I can act if necessary					14	6
I order the cow to be shot and slaughtered and defer my decision until I receive the additional vaccination information I required					59	23
I order the cow to be shot and slaughtered and try to predate the fracture AND make my decision on the basis of the additionally inquired vaccination information					94	36
I defer the decision until I have talked to my supervisor					54	21
Missing					37	14

³ Please see section the section on measures the reason why I retained this concept in spite of its low Cronbach's α .

Table 4 Results of binary regression analysis (Dilemma 1)

	HL test		Omnibus Test of Model Coefficients		Nagelkerke R	B	Exp(B)	Sig.	No of valid observ.
	Chi- square	Sig.	Chi- square	Sig.					
Commitment to ECO	2.99	.701	5.177	.023*	.030	.400	1.492	.025*	226
Constant						-			
						1.227	.293	.006	
Commitment to AW	3.961	.555	2.322	.128	.014	.316	1.372	.130	217
Constant						-			
						1.322	.267	.063	
Commitment to PH	11.852	.037	.012	.914	.000	-.024	.976	.914	222
Constant						1.268	.845	.833	
Enforcement	1.5124	.911	.177	.732	.001	-.070	.932	.732	224
Constant						-.124	.884	.804	
PSM	11.724	.162	2.580	.108	.015	.558	1.746	.111	226
Constant						-			
						2.378	.093	.075	

0 = I disqualify the cattle. (reference category)

1 = I defer the decision until I talked to my supervisor.

* Significant at < 0.05 (2-tailed)

Table 6 Multinomial logistic regression analysis (Dilemma 2)

	Likelihood Ratio Test Chi- square	Sig.	Nagelkerke R	B	Exp(B)	Sig.	No of valid observ.
Commitment to economic interest	.813	.846	.004				221
0 Constant				1.500		.129	
ECO				-.025	.975	.948	
1 Constant				2.390		.012	
ECO				-.202	.817	.586	
2 Constant				1.583		.111	
ECO				-.096	.909	.805	
Commitment to animal welfare	.485	.928	.002				212
0 Constant				1.937		.218	
AW				-.131	.878	.773	
1 Constant				2.767		.069	
AW				-.251	.778	.567	
2 Constant				2.001		.207	
AW				-.183	.833	.690	
Commitment to public health	8.262	.0411 *	.041				217
0 Constant				6.170		.001	
PH				-	.277	.009	
				1.285		*	
1 Constant				5.222		.005	
PH				-.892	.410	.058	
2 Constant				4.030		.035	
PH				-.714	.490	.145	
Strict rule enforcement	4.383	.223	.008				219
0 Constant				.637		.559	
Enforcement				.343	1.409	.463	
1 Constant				1.090		.298	
Enforcement				.356	1427	.430	
2 Constant				1.679		.123	
Enforcement				-.159	.854	.853	
PSM	2.718	.437	.013				221
0 Constant				4.126		.151	
PSM				-.705	.494	.343	
1 Constant				4.569		.099	
PSM				-.699	.497	.328	
2 Constant				1.832		.526	
PSM				-.125	.883	.867	

0 = I order the cow to be shot and slaughtered and try to predate the fracture so that I can act if necessary.

1 = I order the cow to be shot and slaughtered and defer my decision until I receive the additional vaccination information I required.

2 = I order the cow to be shot and slaughtered and try to predate the fracture AND make my decision on

the basis of the additionally inquired vaccination information.
3 = I order the cow to be shot and disqualify it. (reference category)
* Significant at < 0.05 (2-tailed)