Title: Advice Not Safely Ignored: Professional Authority and the Strength of Legitimate Complexity

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ABSTRACT

It is widely debated how ordinary citizens understand and use different types of knowledge and whether the authority of professional expertise is challenged by the spread of information. These debates underline that we know too little about how professional expertise is understood from the citizens' point of view and how citizens decide whether or not to accept various types of expertise as authoritative. This article investigates professional authority understood as lay citizens' willingness to follow certain types of professional advice. We argue that variation in professional authority can be explained by citizens' evaluations of professional expertise and whether they perceive the tasks and problems addressed by professionals as having "legitimate complexity." The analysis uses survey data from two countries, including vignettes on following advice in concrete everyday situations. We find legitimate complexity to be a strong predictor of professional authority although social status also plays a role.

Keywords: Authority; Doctors; Legitimate complexity; Professions; Professional authority; Quantitative methods; Survey data; Teachers; Vignettes

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INTRODUCTION

When citizens experience complex problems in their everyday lives, they often seek professional advice and thus face the choice whether or not to follow the advice. Will they ultimately rely on the professional's given type of specialized expertise or will they be tempted to ignore the advice and rely on other information instead? This article analyses how citizens make this decision and what factors may influence their acceptance of professional advice as authoritative. In the article, we develop a theoretical concept of professional authority and test the concept empirically in a comparative, survey-based study of citizens' perceptions of professional authority. We thereby seek to advance the study of professional authority from a citizens' point of view both theoretically and empirically.

Given the widespread debates about the status of knowledge and science in society today, it is highly relevant to develop a better understanding of how ordinary citizens relate to knowledge authorities like professionals. Current scholarly debates do not really address this issue, typically because they focus on abstract macro narratives such as the alleged wholesale erosion of authority or expertise (Furedi, 2013; Fuller, 2018). These narratives may raise interesting sociological questions, but they often make baseless assumptions about how ordinary citizens approach professional knowledge differently today. Existing sociological scholarship has failed to grasp citizens' acceptance of professional authority, either because authority is studied

superficially as occupational status with little relevance for citizens' real-life problems, or because authority is understood as automatically eroding through modernisation. More investigations are needed into how citizens decide which types of knowledge to accept as authoritative in a situation where so much information is readily available.

We propose to analyse professional authority from the perspective not of professionals, but of citizens' perceived need or demand for advice from professionals. This involves a relational understanding (Emirbayer, 1997) of professional authority as a given type of relationship between professionals and citizens. It also implies that professional authority is specific to the given type of problem or what Parsons termed 'functionally specific' (1939: 460). It is thus imperative to study professional authority in the context of the types of complex problems or tasks citizens face, and where they may seek and take advice from the associated types of specialized expertise (Freidson, 2001; Abbott, 1988; Eyal, 2013). For example, the professional authority of medical doctors concerns whether citizens accept medical expertise as indispensable when faced with health problems, and not merely their positive or negative perceptions of the profession. The research question is therefore: How can professional authority, understood as people's willingness to follow professional advice when faced with complex problems, be explained?

A key factor in our theoretical understanding of professional authority is 'legitimate complexity', which ties authority to professionals' specialized expertise and citizens' perceptions of complex problems. The term legitimate complexity comes from Starr (2017) who demonstrated that laypersons' willingness to submit to doctors' authority was a necessary historical threshold in making medicine a sovereign profession. We argue below that legitimate complexity is not only suited for historical

analyses (Haber, 1991), but highly relevant for understanding how professional authority works today. If certain problems are understood as legitimately complex, ordinary citizens would likely see a given type of specialized expertise as indispensable and follow advice from professionals with that expertise: not necessarily because they trust or appreciate the profession, but because they face problems more or less defined by specialized knowledge.

The article offers three main contributions. First, we contribute with a new theoretical concept of professional authority, which emphasises the role of legitimate complexity in understanding citizens' willingness to follow professional advice. After a brief review of existing studies, we elaborate the concept below by combining elements from classic work on authority while we also modernise the concept to a contemporary setting where knowledge is readily available to everyone. Second, our empirical contribution is to demonstrate that variation in professional authority can be explained by the legitimate complexity of the problems and work tasks associated with different types of specialized formal knowledge (Freidson, 2001; Brante, 2011). Finally, the article contributes by distinguishing legitimate complexity – theoretically as well as empirically – from competing explanations such as authoritarian values, social status, and personalised trust.

EXISTING STUDIES OF PROFESSIONAL AUTHORITY

The existing sociological scholarship on professional authority is relatively scattered and somewhat split between empirical comparisons of authority or prestige across occupations on one hand and theory-centered accounts of authority on the other. In the former group, Gauchat and Andrews (2018) compare cultural authority across various

scientific disciplines, mainly economics and sociology, and link authority to symbolic hierarchies of cultural production. This demonstrates stable knowledge hierarchies, as expected, but ordinary citizens rarely find themselves in situations where they have much at stake with trusting sociological knowledge. Whether or not they ascribe authority to a scientific discipline like sociology, these evaluations are less consequential and therefore potentially superficial in comparison with their dependence upon professional advice and expertise.

We have similar reservations about other rankings of occupational prestige (Svensson and Eriksson, 2009; Coxon and Jones, 1978; 1979). These studies include many occupations besides professional fields, but they tend to measure esteem rather than authority, because they do not consider the importance of professional work tasks from the citizen's perspective. This makes it hard to compare respondents' evaluations of say astronomers, dentists and secretaries. Zhou's (2005) more nuanced ranking includes various measures of salience to explain which professions are evaluated as legitimate and appropriate. The rankings we employ below go further in this direction by focusing directly on citizen acceptance of authority in connection with given types of problems that citizens may need professional knowledge for.

Studies of following professional advice typically focus on medical doctors (Menchik and Jin, 2013; Brown et al., 2015). Haug and Lavin's study analysed lay acceptance of medical advice and found it to be partially undermined by consumerism and anti-authoritarian values (1983: 16). McKinlay and Marceau (2002) similarly analysed eight structural factors potentially undermining medical authority (cf. Schlesinger, 2002). A common limitation in these studies is that the present is juxtaposed to some sort of "golden age" of medical authority in the past.

The broader theoretical literature on authority is characterised by a similar focus on erosion, decline or crisis of authority in modern society (Giddens, 1994; Sennett, 1980; Luxon, 2013; Bauman, 1987). We propose to go beyond and entirely leave aside the issue of erosion, which has led sociological theory to view authority as no longer significant (Furedi, 2013: 3).

CONCEPTUALISING PROFESSIONAL AUTHORITY

To shift the focus from past erosion to the present, it is vital to separate the earlier theoretical understandings that we use as inspirations for our concept of professional authority from how these earlier scholars diagnosed authority and its possible demise in their time.

An obvious point of departure is Arendt's article "What is authority?" from 1961 (Arendt, 2006), which defined authority and argued that it had effectively vanished from the modern world. Such sweeping claims are dubious both empirically and as a basis for theorising authority. Just as Foucault (1976, 2000) analysed power in contexts where subjects are partially free to act and resist, we similarly understand the possible challenges to authority – e.g. individualisation or the spread of information – as reasons to study how authority works. Arendt's diagnosis aside, her definition of authority is nevertheless helpful. She positions authority between persuasion and force and goes through various historical conceptions including this definition originally from Roman law: "[Authority is]...more than advice and less than a command, an advice which one may not safely ignore" (Arendt, 2006: 92, 122; see also Krieger, 1977). The definition shifts focus from authority figures to the subjects feeling neither entirely free

nor entirely forced to follow advice. In order to understand the nuances between advice and command, we argue that authority should be studied in a relational setting.

This connects with Weber's definition of authority as “the probability that certain specific commands (...) will be obeyed by a given group of persons” (1978: 212). The wording may connote obedience to military commands (Sennett, 1980: Milgram, 1974), but the point is to open empirical inquiries into when people accept certain types of 'commands' as authoritative. Acceptance here is thus fundamentally different from the charismatic appreciation of authority figures. Most important is whether people perceive certain problems as unsafe or risky to handle by themselves or whether they believe they can safely ignore professional advice and decide for themselves . These perceptions likely vary between different fields, not only because of status differences between professional knowledge forms, but also because ignoring medical advice, legal advice, or clerical advice can have entirely different consequences. Each situation, however, involves a situation where citizens evaluate the advice given to them by an authority with superior expertise about the problem in question.

The problem-specific nature of professional authority can be further understood through Parsons’ proposal that professional authority is ‘functionally specific’ (1939: 460). This is specified further in Starr’s argument that professions execute “cultural authority” by having “particular definitions of reality and judgments of meaning and value [...] prevail as valid and true” (2017: 13). The underlying condition of cultural authority is what Starr terms “legitimate complexity” (2017: 59). It is the perception that certain problems or work tasks are of a complex nature that requires specialized expertise. For example, the authority of musicologists not only

depends on my perception of their formal knowledge about music, but also on whether I need their expertise in order to appreciate or understand a piece of music. It is also possible to believe in the legitimate complexity of a given type of problem but still doubt whether professionals in the field have sufficient expertise to handle a given problem.

Professional authority thus depends upon beliefs in the legitimate complexity of professional tasks as well as upon beliefs in the occupation's command of this expertise. This makes authority more multifaceted and dynamic than a simple measure of occupational prestige, status or esteem. For example, general trust in lawyers might be lower than trust in schoolteachers or social workers in some countries, but are people therefore less likely to follow advice from lawyers? Not if they still see legal problems as being more legitimately complex than problems associated with teachers or social workers, and if they see the legal profession as having a strong command of the relevant knowledge. Trust is not irrelevant, but citizens' evaluations of professionals should be tied to their perceived need for professional expertise. While the citizen's own knowledge and education may be important here, strong professions are often able to cultivate this need over long stretches of time (Abbott, 1988: 61), typically through a codification of specialized formal knowledge (Freidson, 2001: 32).

Perceptions of legitimate complexity are not black or white, but vary in how laypersons perceive both the problems and the expertise of professional groups relative to their own competence in the area. The grey zones and relative differences in the authority of various professional groups are highly interesting, because this is where we may see contestations of established expertise or where some citizens may find their own information sufficient to bypass professional advice and choose for themselves

(Halpern, 2004). We therefore use comparisons across professions, across problems and across groups of citizens to analyse variation in professional authority instead of trying to assess authority as a generic phenomenon.

We have now presented our theoretical concept of professional authority, understood as the willingness to follow advice based on professional expertise, which can be explained by perceptions of the legitimate complexity of professional problems and by evaluations of professions as having the necessary expertise. The next section presents the two hypotheses guiding our analyses.

HYPOTHESES

We seek to understand whether and why people are willing to accept some forms of expertise as authoritative and consequently follow advice simply because it is given by a professional in the field. People's willingness to do so is expected to primarily hinge on how they evaluate the legitimate complexity of the problems typically addressed by specialized professional knowledge and expertise. This leads to our first hypothesis:

H1: Professional authority, understood as people's willingness to follow professional advice, can be explained by people's evaluation of the legitimate complexity of specialized professional knowledge and expertise.

To thoroughly test this hypothesis, we compare professions who work on problems that are normally considered to involve different degrees of legitimate complexity. Also, we further hypothesise that differences in authority between professions are determined by

their base of formal knowledge understood as underlying the evaluations of professional expertise.

H2: Professional authority, understood as people's willingness to follow professional advice, can be explained by the strength of the profession's formal knowledge.

Our claim here is mainly that differences in professional authority boil down to whether people perceive various types of professional knowledge as being legitimately complex. We expect these perceptions of professional knowledge to be more important than some of the cultural and social factors often associated with authority, such as the social status of professions, the personal relationship between a citizen and a specific professional, and the citizen's authoritarian values or demographic characteristics (education, age, gender, and employment). These alternative explanations are not useless but ill-equipped to explain why authority varies between professions. Even so, all of these factors are included in our model to test their importance empirically, and thus to thoroughly test the two main hypotheses.

DATA AND METHODS

We test our hypotheses using original survey data in order to enable statistical inference and in order to study authority across several different professions. The analysis thereby prioritises breadth over depth as a first step towards explaining professional authority.

To strengthen generalisability, the same questionnaire was used in both the US and Denmark. Both countries are highly developed post-industrialised societies, but they clearly also differ on key social and institutional characteristics. Denmark is a

small, quite homogenous society with a high degree of equality (Gini coefficient, 2017 = 0.26, the 5th lowest among 37 OECD countries, OECD 2020) and a strong orientation towards egalitarian and community values. The US is a large and highly diverse society with much higher inequality (Gini coefficient, 2017 = 0.39, 7th highest among 37 OECD countries, OECD 2020) and more focus on individualism and competitiveness. Further, the US is a federal system with a residual welfare model and limited access to publicly funded welfare services, including healthcare, childcare and tertiary education. In contrast, Denmark is a unitary, comprehensive welfare state giving citizens universal access to free healthcare, free primary, secondary, and tertiary education, as well as subsidised high-quality childcare from age zero. Finding similar results in these two societies thus strengthens generalisability of the argument because measures of professional authority are less likely to simply reflect country-specific cultural traits, values or institutional characteristics of professional work.

Both surveys were conducted as computer-assisted web interviews (CAWI) collected by YouGov among Americans and Danes aged 18-74. Interviews were conducted with 1.728 respondents (53.1% of 3254 people contacted) in the US and 1.720 respondents (42.9% of 4013 people contacted) in Denmark. Although the response rates are somewhat low, the high number of respondents and their and demographic distribution strengthen our claim for generalisability. The representativity of the two samples is strengthened further by applying weights in all analyses (see table A1, online appendix).

Our dependent variable, professional authority, is not easy to measure in survey questions. Professional authority is defined as people's willingness to follow professional advice, but the survey questions only measure how people think they

would respond to advice and not their actual behavior. We handle the potential social desirability bias by testing our hypotheses across two different operationalisations, general and concrete professional authority.

We operationalise *general professional authority* as people's general willingness to follow professional advice in any given situation. This is measured by asking people how likely they are (on a scale from 0 to 10) to follow advice if it comes from one of nine different types of professionals. Each respondent gets one question for each profession to compare authority across the nine professions, and the sequence is randomised to avoid response bias. The nine professions were selected to represent different types of knowledge and professional problems, including professions dealing with problems traditionally considered legitimately complex (lawyers, medical doctors), professions dealing with problems which could be considered less legitimately complex (bank employees, pre-school teachers) and professions which could be considered somewhat in between these two groups. Also, as explained below, we have strived to include professions representing different levels of formalised knowledge, and different levels of professional status (operationalised as length of education).

Second, we operationalise *concrete professional authority* as people's willingness to follow professional advice in specific situations. We measure this through a vignette experiment (Druckman et al., 2006; Gaines et al., 2007) presenting respondents with two scenarios in which they receive professional advice in response to a specific problem. The first scenario offers respondents advice from a medical doctor about a medical problem, and the second scenario offers advice from a schoolteacher about a child's problems at school. Each vignette asks if respondents would follow professional advice even if it involves a solution they would rather avoid, if they would

prefer to seek a second opinion, or if they would rather ignore advice based on professional specialized expertise and seek alternative solutions instead. Vignettes make respondents think of a concrete situation rather than a diffuse appreciation of the profession, but they also offer comparisons of two professions referring to different types of knowledge and problems. The vignettes offer respondents six different possible answers (see table 3 and online appendix). For the purpose of analysis, we recoded concrete professional authority as a dummy variable with two responses recoded as following advice and the rest as not following advice (see online appendix for detailed description).

The two operationalisations of the dependent variable differ in their degree of concreteness. Questions on general professional authority enable comparisons across professions, whereas questions on concrete professional authority situate answers in real-life scenarios with stronger validity.

Our first independent variable (H1 - evaluations of legitimate complexity) is operationalised as *professional expertise*, i.e. as people's evaluations of the expertise of various professions. We are not interested in people's general perceptions of broader social problems, but rather how they understand the types of problems addressed and defined by a specific type of professional knowledge. Consequently, we do not ask respondents if they think a given profession has the highest level of knowledge, but whether they think a specific profession possesses the "necessary" professional expertise (on a scale from 0 to 10). This lets respondents evaluate professional expertise within the context of concrete problems as understood by ordinary citizens.

The second independent variable (H2) is the degree of *formal knowledge*, which we measure by sorting the nine professions into four groups: 1. Medicine and

science (medical doctors, physiotherapists, and engineers), 2. Law (lawyers), 3. Arts, humanities, and education (architects, psychologists, teachers, and preschool teachers), and 4. Finance (bank employees). This division is not perfect, since for instance architects combine knowledge from the humanities (e.g. art history, creative design and aesthetics) with technical construction skills. We place them with the former, because the 'aesthetic qualities' distinguish architectural work most clearly from engineering (Champy, 2006: 654).

We include a range of variables as controls and alternate explanations. First, we operationalise *professional status* as the length of education (Andersen and Pedersen, 2012), and divide the professions into high status (medical doctors, lawyers, psychologists, engineers, and architects) and medium status (teachers, pre-school teachers, physiotherapists, and bank employees). Other control variables are operationalised as in existing literature. As Svensson and Eriksson (2009), we asked people to evaluate the *social status* of various professions (on a scale from 0 to 10) and included a measure of *authoritarian values* drawn from the Danish part of the European Values Study (Gundelach, 2011; see online appendix for further presentation). In order to measure previous experiences with professionals, respondents were also asked to evaluate the frequency and quality of previous interactions with doctors and schoolteachers. This was also included as experimental condition in the vignettes by randomly varying whether or not the respondent is described as having a personal relationship with the professional. Finally, we included various questions on respondents' demographic characteristics, including *gender, age, educational background, income, and occupational status*. Most variables have been recoded for the purpose of analysis. Table 1 below gives an overview whereas the online appendix

offers a detailed explanation of operationalisations, full length questions and recoding. We refer to the operationalised variable names throughout the analyses.

[Table 1 about here]

We test our hypotheses using either OLS regression or logistical regression, depending on the coding of the dependent variable. All independent categorical variables are included as dummies, with the reference category indicated in the analysis. Some analyses are conducted separately for each profession and some include all nine or only two professions. The latter analysis builds on a transposed dataset, where each individual appears either nine or two times, and we therefore include cluster-robust standard errors to account for the structure of the data. Most analyses first show a model with only our primary independent variable(s) followed by a full model with all variables.

Standard analyses of assumptions have been performed for all analyses, including tests for linearity, multicollinearity and heteroscedasticity. No strong violations were found, but due to small indications of heteroscedasticity in all analyses, a conservative threshold for significance ($p<0.001$) has been applied when interpreting results.

WHY ARE PEOPLE WILLING TO FOLLOW PROFESSIONAL ADVICE?

The presentation of results begins with a brief descriptive analysis of general and concrete authority. As can be seen in table 1, there are some differences both between professions and (to a lesser extent) between countries. As for general professional

authority, Americans on average tend to be more willing to follow advice from medical doctors and engineers than from pre-school teachers and bank employees. Also, people seem to be more dispersed in their evaluations of pre-school teachers and psychologists compared to medical doctors. Danes are on average more willing to follow advice from lawyers and medical doctors than from bank employees and pre-school teachers. Further, Danes are more dispersed in their evaluations of bank employees and pre-school teachers compared to medical doctors. In general, however, it is fair to say that the general authority of professionals depends very much on who you are taking advice from.

[Table 2 about here]

Moving on to concrete professional authority, we see that confronted with the vignettes, more than 60% of respondents in both the US and Denmark tend to either follow professional advice from their own doctor or to seek advice from another doctor. In comparison, only around 45% tend to follow the advice from a schoolteacher or seek advice from another teacher in both countries (see table 3).

[Tables 3 about here]

Our first descriptive analysis thus concludes that citizens in general are willing to follow concrete professional advice but to varying degrees, depending on the source.

Moving on to the main explanatory analysis and hypothesis tests, we first focus on general authority compared across nine professions. The online appendix

shows separate analyses of each profession and table 3 shows the joint analyses of all nine professions. In each of the separate analyses, professional expertise is strongly correlated with professional authority, and this relationship holds when the possible alternative explanations are included such as social status of the profession, authoritarian values, and a range of demographic variables. However, in all analyses, social status is also significantly correlated with general professional authority.

[Table 4 about here]

In the joint analysis (table 4), the simple model shows that formal knowledge and professional status correlate significantly with general professional authority in the US as well as in Denmark. When professional expertise is added to the model, the coefficients shrink, indicating that formal knowledge and length of education are mediated by the evaluation of professional expertise; and when social status, authoritarian values, and demographic characteristics are finally added, coefficients for formal knowledge remain stable and significant, whereas coefficients for professional status become positive. Further, although we hesitate to make strong inferences on effect sizes based on these simple models, the analyses indicate that professional expertise has a stronger correlation with general professional authority compared to formal knowledge (where the effect size seems somewhat small) as well as social status. This is supported by the difference in R2 in the models.

In our interpretation, this lends support to both hypotheses 1 and 2, i.e. that professional authority as people's willingness to follow professional advice can be explained by their evaluations of professional expertise as well as by the profession's

degree of formal knowledge. Also, we suggest that professional status (measured as the length of professional education) may be important, since it may indirectly influence people's decisions to follow professional advice.

It is worth considering whether these results are affected by response bias. The three sets of questions (willingness to follow advice, professional expertise, and social status) have a similar form, which could give some bias. However, professional expertise is more strongly correlated with general professional authority than social status, which indicates that it is more than response bias, even if the individual coefficients may be slightly inflated. Also, analyses of the bivariate correlations among these variables, as well as authoritarian values, indicate that we are indeed measuring different phenomena (see online appendix).

The analysis in table 4 focuses on general professional authority based on questions about whether people would follow advice if it came from a doctor, an architect, and so on. This is not necessarily how people would evaluate professional authority in specific situations. The second analysis therefore focuses on concrete professional authority and uses the vignettes as a measure of whether people are willing to follow professional advice from either a medical doctor or a schoolteacher when they are placed in a situation with a concrete problem relevant to the profession in question. Again, this is analysed both separately for the two professions (see online appendix) and in a joint analysis.

In the separate analyses, professional expertise correlates quite strongly and significantly with concrete professional authority for both medical doctors and teachers in both countries. The correlation holds for American medical doctors and teachers and for Danish teachers in the full model, which includes not only social status,

authoritarian values, and demographic characteristics, but also whether or not the vignette describes the citizen as having a personal relationship or acquaintance with the professional. Neither of these measures of personal relationships are significant (see table 5). Also, previous bad experiences with teachers weaken the tendency to follow advice from teachers in Denmark. Overall, the separate analyses of the two vignettes lend some support to hypothesis 1.

[Table 5 about here]

The joint analysis compares medical doctors and teachers, and here, there is support for hypothesis 2. Based on the vignette experiment, we can thus see that teachers have lower concrete professional authority than medical doctors in both countries, and that a personal relationship with the professional does not matter on average. To us, this means that formal knowledge seems to strengthen concrete professional authority, although the effect sizes are again somewhat small.

In summary, professional authority is strongly correlated with professional expertise across the two different measures of general and concrete professional authority. Whether people think about a profession in general, or whether they imagine receiving advice on a concrete problem in a specific situation from either a medical doctor or schoolteacher, evaluations of professional expertise impact the tendency to follow advice. Both the general and specific analyses also show that people are more willing to follow advice from professionals with a high degree of formal knowledge compared to other professions, although the analyses seem to indicate that the effect of formal knowledge is somewhat smaller than the effect of professional expertise. This

lends support to hypotheses 1 and 2. However, social status also seems to be consistently important for both general and concrete professional authority.

DISCUSSION

The empirical findings generally support the expectations we derived from the theoretical concept of professional authority in the first part. Measured as people's tendency to follow professional advice, there is some individual variation, but professional authority mostly depends on who gives the advice; not the specific person, but the type of specialized knowledge and expertise represented by the professional. The analyses cannot say whether authority as a whole has eroded in contemporary society, and since there is no way to know how authority worked in the past, we have left the question of erosion aside. If professional authority was in fact in deep crisis, however, the results would probably look very different.

The results show that professional authority consistently correlates with people's evaluation of professional expertise as well as with a higher level of formal knowledge. This supports the idea that professional authority is grounded in legitimate complexity, albeit not only understood as a historical threshold (Starr, 2017), but conceived and studied also as a key variable in the present. Some citizens perceive some forms of knowledge and problems as more legitimately complex than others, and there is a substantial analytical value to extract from these disparities. Further, the results substantiate the claim that professional authority is a separate phenomenon from authoritarian values. However, the results also indicate that social status to some extent correlates with professional authority.

The research design does not facilitate any interpretation of cause and effect. We understand legitimate complexity as the explanation of professional authority and following advice, but the opposite cannot be ruled out, i.e. if people evaluate legitimate complexity on the basis of professions they take advice from. The same goes for social status, which could also in principle be an effect of professional authority and legitimate complexity. Nonetheless, further analyses are needed here.

The findings should be generalisable, since they build on data with remarkable consistency across two national and cultural contexts. It is not simply specific cultural or institutional circumstances that tie professional authority to legitimate complexity and formal knowledge. It applies more generally across modern societies. The importance of having a personal relationship with a professional does seem to vary somewhat between countries, which may reflect different institutional arrangements. For instance, it may reflect the broader use of doctors as a permanent "family physician" in the Danish healthcare system and a more widespread culture of seeking "second opinions" in the American.

On the methodological contributions, we find great analytical value in studying professional authority as a relational phenomenon. When people evaluate professional authorities, it is essential to place those evaluations in a context close to everyday interactions with professionals, which is done in the survey experiments with vignettes. These experiments could easily be expanded to offer more tests of our claim, for instance with vignettes varying the description of the problems and the degrees of legitimate complexity rather than varying both the problem *and* the professional at the same time.

Finally, the study underlines the need for other methods in order to understand professional authority more fully. We have previously studied authority claims in document analyses of how professional associations address threats to their authority (Harrits and Larsen, 2016: Larsen, 2016; Larsen, 2021). In-depth interviews with professionals could also be helpful to understand the mechanisms involved in citizens' acceptance of professional authority, while observations of encounters between professionals and citizens could clarify the performative aspects of professional authority. Also, further studies could explore whether citizens who themselves belong to a recognised profession are more or less likely to accept the authority of other professionals compared with citizens without a particular professional background.

CONCLUSION

The article aims to contribute to a better understanding of professional authority in contemporary society. Instead of sweeping sociological claims about erosion, we provide both a theoretical framework and an empirical analysis of professional authority that is rooted in a relational understanding of authority. The specific answers, findings, and results we produce may be preliminary and limited in scope, but a key contribution lies simply in directing scholarly attention to why people accept or defy professional authority. With the increased spread of information and individualisation today, it is important to understand why contemporary individuals may choose to accept professional advice as authoritative, even in situations where they have plenty of options not to do so. The argument here is thus not only about professions, but also about being subject to certain types of knowledge, even if these forms of knowledge and associated problems are often organised around professional groups and jurisdictions.

We therefore also see this as a contribution to the broader sociology of knowledge and science.

Another advantage of studying professional authority in a period where it is called into question is to separate professional authority as a knowledge-driven phenomenon from more diffuse measures of social status and popularity. It is possible that professional authorities who are successful may also be popular or even enjoy a certain charisma, as doctors allegedly did in the "golden age" of medicine. However, this charisma was not necessarily a condition of their authority, and some types of professional expertise may command authority without being particularly popular. The core argument in this article is that ordinary citizens are only willing to subject themselves to professional authority if they understand the professional's expertise as being a type of advice they cannot safely ignore.

One possible limitation of our approach is that professionals may not be able to give advice as freely as portrayed in our vignette. Professional work is increasingly subject to detailed regulation, for instance in organisational procedures, protocols or public policies (e.g. Evetts, 2006; Noordegraaf, 2015). If citizens are aware of such organisational protocols, it could affect their evaluations of legitimate complexity, and it could even have an independent impact on professional authority. Consequently, future studies could investigate the role of organisational protocols on professional authority.

Beyond sociological studies, our theoretical argument and empirical findings may have implications for how policymakers can regulate professional authority. While being subject to professional authority is not in itself good or bad, it may generate resistance against what some see as paternalist authority. Future studies

could investigate further how people who literally protest against professional authorities reason about their deference, for instance on vaccines. Our argument about legitimate complexity does not make resistance futile, but it shows that being free of knowledge-based authority is hard even in a society where information is widely available. The same goes for policymakers keen to regulate professions and their exercise of authority. Because our dependence on professional authority does not simply come from market monopolies or established privileges, it is probably also more resilient. Privileges may be regulated, but citizens will likely still demand professional knowledge to interpret legitimately complex problems for them. Becoming independent of professional knowledge is thus potentially much harder than it is to become – culturally or institutionally – free to resist professional power.

Finally, our analyses do not necessarily say much about professional practice in everyday work situations. Even if the willingness to follow professional advice is associated with legitimate complexity and professional expertise, this says little about the quality of that advice or whether it is solely rooted in professional expertise. Future research could therefore also benefit from both theoretical explorations and empirical analyses of the link between professional authority, legitimate complexity, and professional practice.

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REFERENCES

Abbott A (1988) *The System of Professions. An Essay on the Division of Expert Labor*. Chicago: The University of Chicago Press.

Andersen LB, Pedersen LH (2012) Public Service Motivation and Professionalism. *International Journal of Public Administration* 35: 46–57.

Arendt H (2006 [1961]) *Between Past and Future. Eight Exercises in Political Thought*. New York: Penguin.

Bauman Z (1987) *Legislators and Interpreters: On Modernity, Post-modernity, and Intellectuals.* Cambridge: Polity Press.

Brante T (2011) Professions as Science-Based Occupations. *Professions and Professionalism* 1:4–20.

Brown P, Elston MA Gabe J (2015) From patient deference towards negotiated and precarious informality: An Eliasian analysis of English general practitioners' understandings of changing patient relations. *Social Science and Medicine* 146: 164-172.

Champy F (2006) Professional Discourses under the Pressure of Economic Values: The Case of French Architects, Landscape Designers and Industrial Designers. *Current Sociology* 54(4): 649–661.

Coxon A, Jones C (1978) *The Images of Occupational Prestige. A Study in Social Cognition*. London: MacMillan.

Coxon A, Jones C (1979) *Class and Hierarchy: The Social Meaning of Occupations*. New York: St. Martin's Press.

Druckman JN, Green DP, Kuklinski JH, Lupia A (2006) The Growth and Development of Experimental Research in Political Science. *American Political Science Review* 100: 627–35.

Emirbayer M (1997) Manifesto for a Relational Sociology. *American Journal of Sociology* 103(2): 281-317.

Evetts J (2006) Short Note: The Sociology of Professional Groups: New Directions. *Current Sociology* 54(1): 133–143.

Eyal G (2013) For a Sociology of Expertise: The Social Origins of the Autism Epidemic. *American Journal of Sociology* 118: 863–907.

Foucault M (1976) *Volonté de savoir: Histoire de la sexualité 1.* Paris: Gallimard.

Foucault M (2000) The Subject and Power. In: *Power: Essential Works of Foucault 1954–1984, Volume 3.* London: Penguin, 326–48.

Freidson E (2001) *Professionalism. The Third Logic*. Cambridge: Polity Press.

Fuller S (2018) *Post-Truth. Knowledge as a Power Game*. London: Anthem.

Furedi F (2013) *Authority. A Sociological History*. Cambridge: Cambridge University Press.

Gauchat G, Andrews KT (2018) The Cultural-Cognitive Mapping of Scientific Professions. *American Sociological Review* 83(3): 567-95.

Gaines BJ, Kuklinski JH, Quirk PJ (2007) The Logic of the Survey Experiment reexamined. *Political Analysis* 15:1–20.

Giddens A (1994) Living in a Post-Traditional Society. In: Beck U, Giddens A, Lash S (eds) (1994) *Reflexive Modernization. Politics, Tradition and Aesthetics in the Modern Social Order*. Cambridge: Polity Press, 56-109.

Gundelach P (2011) *Små og store forandringer*. Copenhagen: Hans Reitzels Forlag.

Haber S (1991) *The Quest for Authority and Honor in the American Professions, 1750- 1900*. Chicago: Chicago University Press.

Halpern SA (2004) Medical Authority and the Culture of Rights. *Journal of Health Politics, Policy and Law* 29: 835–52.

Harrits, G S, Larsen L T (2016) Professional claims to authority: a comparative study of Danish doctors and teachers (1950-2010). *Journal of Professions and Organization 3*(2): 154-169.

Haug M, Lavin, B (1983) *Consumerism in Medicine: Challenging Physician Authority*. London: Sage.

Krieger, L (1977) The Idea of Authority in the West. *The American Historical Review* 82: 249–70.

Larsen, L T (2016) No Third Parties. The Medical Profession Reclaims Authority in Doctor-Patient Relationships. *Professions & Professionalism* 6(2): 1-14.

Larsen, L T (2021) Trajectories of Professional Authority: A Comparative Study of Medical Associations and Professional Authority Claims. Accepted for publication in *Journal of Health Politics, Policy and Law.*

Luxon N (2013) *Crisis of Authority. Politics, Trust, and Truth-Telling in Freud and Foucault*. Cambridge: Cambridge University Press.

McKinlay J, Marceau L (2002) The End of The Golden Age of Doctoring. *International Journal of Health Services* 32: 379–416.

Menchik D Jin L (2013) When do doctors follow patients' orders? Organizational mechanisms of physician influence. *Social Science Research* 48: 171-184.

Milgram S (1974) *Obedience to Authority. An Experimental View*. New York: Harper & Row.

Noordegraaf M (2015) Hybrid Professionalism and Beyond: (New) Forms of Public Professionalism in Changing Organizational and Societal Contexts. *Journal of Professions and Organization* 2(2): 1–20.

OECD (2020) *Income inequality*. Available at: https://data.oecd.org/inequality/income-inequality.htm.

Parsons T (1939) The Professions and Social Structure. *Social Forces* 17: 457–67.

Schlesinger M (2002) A Loss of Faith: The Sources of Reduced Political Legitimacy for the American Medical Profession. *The Milbank Quarterly* 80:185–235.

Sennett R (1980) *Authority*. London: Faber & Faber.

Starr P (2017) *The Social Transformation of American Medicine. The Rise of a Sovereign Profession and the Making of a Vast Industry*, 2nd edition. New York: Basic Books.

Svensson LG and Eriksson YU (2009) *Yrkesstatus. En sociologisk studie av hur yrken uppfattas och värderas*. *Research report no. 140*. Gothenburg: Department of Sociology.

Weber M (1978) *Economy and Society. An Outline of Interpretive Sociology*. Berkeley: University of California Press.

Zhou X (2005) The Institutional Logic of Occupational Prestige Ranking: Reconceptualization and Reanalyses. *American Journal of Sociology* 111(1): 90-140.

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Tables

Table 1: Overview of variables

Variable	Operatio-nalisation	Measure	Range	Mean / Mode US / DK	St.dev. US / DK
		Dependent variable			
Professional authority	General professional authority	Survey questions asking to what degree people would follow advice from 9 different professions.	0-10	6.92 / 7.00	2.18 / 2.08
	Concrete professional authority	Vignette presenting a concrete medical problem and a problem for a child in school.	2 groups	yes / yes	-
		Independent variables			
Legitimate complexity	Professional expertise	Survey question asking people to what degree they see 9 different professions as having the necessary professional expertise	0-10	7.04 / 7.03	2.24 / 1.99
Formal knowledge		Sorting nine professions into four groups	4 groups	Humanities / other / Humanities / other	-
		Controls			
Professional status	Length of education	Sorting 9 professions into two groups by length of education	2 groups	High / High	
Social status		Survey question asking people to evaluate the social status of 9 professions.	0-10	6.49 / 6.46	2.33 / 2.12
Authoritarian values		Sum index based on five survey questions	0-1	0.34 / 0.25	0.19 / 0.17
Gender		Survey question on gender	2 groups	Female / Male	-
Age		Survey question on age	4 groups	18-34 / 18-34	-
Education		Survey question on highest level of education	5 groups	High School / Vocational Ed.	-
Income		Survey question on annual income	5 groups	(< 23,000 $) / 300,000 - 499,999 DKK	-
Occupation		Survey question on current occupational status	3 groups	Employed / Employed	-
Personal relationship		Vignette included two experimental conditions varying whether or not respondent is to imagine having a personal relations top doctor/teacher	2 groups	Randomly allocated 50 /50	

Note: Mean, mode and standard deviation in table is given for the joint analysis presented in the article (transposed dataset). Values for dependent variables are calculated in two different transposed datasets. Values for independent variables are calculated using the dataset transposed for OLS regression of concrete professional authority. Since datasets are transposed, the number of cases is not given. See online appendix for wording of questions, answers and recoding as well as individual measures for each profession. Variables only used in analyses presented in the online appendix (contact and experience with doctor) are also presented in the appendix.

Table 2: Descriptive analysis of general professional authority across nine professions

The US					Denmark				
Profession	**Mean (st.dev)**	**N**	**95% Lower Conf. Interval**	**95% Upper Conf. Interval**	**Profession**	**Mean (st.dev.)**	**N**	**95% Lower Conf. Interval**	**95% Upper Conf. Interval**
Medical doctor	7.69 (1.92)	1,612	7.60	7.79	Lawyer	8.02 (1.87)	1,720	7.93	8.10
Engineer	7.36 (2.00)	1,558	7.26	7.46	Medical doctor	8.00 (1.65)	1,678	7.92	8.08
Lawyer	7.35 (2.05)	1,596	7.25	7.45	Physiotherapist	7.51 (1.82)	1,659	7.42	7.59
Physiotherapist	7.28 (2.11)	1,608	7.18	7.39	Engineer	7.39 (1.76)	1,574	7.31	7.48
Architect	7.16 (2.03)	1,552	7.06	7.26	Psychologist	6.91 (2.04)	1,578	6.81	7.01
Psychologist	6.70 (2.26)	1,595	6.58	6.81	Architect	6.74 (1.95)	1,563	6.65	6.84
School teacher	6.53 (2.18)	1,586	6.42	6.63	School teacher	6.33 (1.98)	1,572	6.23	6.43
Pre-school teacher	6.15 (2.36)	1,534	6.04	6.27	Pre-school teacher	6.13 (2.12)	1,567	6.02	6.23
Bank employee	6.03 (2.20)	1,577	5.92	6.14	Bank employee	5.87 (2.20)	1,639	5.76	5.97

Note: Double bars indicate groups with statistically significant differences at .95-level.

Table 3: Descriptive analysis of concrete professional authority (2 professions)

The US					
Doctor	**Frequency**	**Percent**	**Teacher**	**Frequency**	**Percent**
Follow the doctor's advice	259	15.0	Follow the teacher's advice	166	9.6
Seek a second opinion from another doctor before agreeing to the operation	905	52.4	Seek a second opinion from another teacher before agreeing to the class switch	630	36.5
Ask the doctor for documentation before agreeing to the operation	303	17.5	Ask the teacher for documentation before agreeing to the class switch	561	32.5
Search the internet to find another solution	37	2.2	Search the internet to find another solution	50	2.9
Seek help from an alternative medicine practitioner	43	2.5	Consider moving my child to a different school	53	3.1
Wait and see if the problem goes away by itself	51	2.9	Wait and see if the problem goes away by itself	70	4.0
Missing	130	7.5	Missing	198	11.4
Total	1,728	100	Total	1,728	100

Denmark					
Doctor	**Frequency**	**Percent**	**Teacher**	**Frequency**	**Percent**
Follow the doctor's advice	474	27.6	Follow the teacher's advice	114	6.6
Seek a second opinion from another doctor before agreeing to the operation	572	33.2	Seek a second opinion from another teacher before agreeing to the class switch	657	38.2
Ask the doctor for documentation before agreeing to the operation	435	25.3	Ask the teacher for documentation before agreeing to the class switch	378	22.0
Search the internet to find another solution	52	3.0	Search the internet to find another solution	71	4.1
Seek help from an alternative medicine practitioner	30	1.8	Consider moving my child to a different school	176	10.3
Wait and see if the problem goes away by itself	56	3.2	Wait and see if the problem goes away by itself	79	4.6
Missing	101	5.9	Missing	245	14.2
Total	1,720	100	Total	1,720	100

Table 4: OLS regression, general professional authority

	The US		
	Simple model	**Simple model II**	**Full model**
Professional status (high)			
Low status	-0.448*** (0.03)	0.024 (0.03)	0.154*** (0.03)
Formal knowledge (Science)			
Law	-0.250*** (0.04)	0.054 (0.04)	0.122 (0.04)
Humanities/other	-0.740*** (0.03)	-0.246*** (0.03)	-0.188*** (0.03)
Finance	-1.123*** (0.06)	-0.287*** (0,05)	-0.214*** (0.05)
Professional expertise (0-10)		0.680*** (0.01)	0.589*** (0.02)
Social status (0-10)			0.155*** (0.02)
Authoritarian values (0-1)			0.160 (0.16)
Gender (male)			
Female			-0.011 (0.05)
Age (18-35)			
35-49			0.115 (0.08)
50-64			0.246 (0.07)
65-74			0.303 (0.09)
Education (no high school)			
High school			-0.230 (0.16)
Vocational education			-0.196 (0.15)
Bachelor's degree			-0.050 (0.16)
Master's degree			-0.104 (0.17)
Income (< 23,000 $)			
23,000 - 44,999 $			0.061 (0.07)
45,000 - 75,999 $			0.054 (0.07)
76,000 - 121,000 $			0.154 (0.10)
> 121,000 $			0.193 (0.12)
Occupation (employed)			
Student			0.071 (0.12)
Not employed / don't now			-0.011 (0.06)
Constant	8.047*** (0.06)	2.236*** (0.11)	1.559*** (0.23)
Adjusted R^2	0.06	0.51	0.53

Note: Reference categories are listed in parentheses. *** p<0.001. Non-standardised OLS coefficients in cells. Clustered standard errors in parentheses.

Denmark			
	Simple model	**Simple model II**	**Full model**
Professional status (high)			
Low status	-0.436*** (0.03)	-0.071 (0.03)	0.226*** (0.04)
Formal knowledge (Science)			
Law	0.230*** (0.04)	0.125 (0.04)	0.099 (0.04)
Humanities/other	-1.040*** (0.03)	-0.492*** (0.03)	-0.381*** (0.04)
Finance	-1.483*** (0.06)	-0.780*** (0.05)	-0.774*** (0.06)
Professional Expertise (0-10)		0.697*** (0.02)	0.583*** (0.02)
Social status (0-10)			0.203*** (0.02)
Authoritarian values (0-1)			-0.041 (0.16)
Gender (male)			
Female			-0.063 (0.05)
Age (18-35)			
35-49			-0.030 (0.08)
50-64			-0.087 (0.09)
65-74			0.036 (0.10)
Education (no high school)			
High school			-0.007 (0.11)
Vocational education			0.053 (0.08)
Bachelor's degree			-0.004 (0.08)
Master's degree			0.028 (0.10)
Income (< 150,000 DKK)			
150,000 - 299,999 DKK			0.004 (0.08)
300,000 - 499,999 DKK			0.125 (0.08)
500,000 – 800,000 DKK			0.249 (0.12)
> 800,000 DKK			0.169 (0.13)
Occupation (employed)			
Student			0.188 (0.12)
Not employed / don't now			0.057 (0.07)
Constant	8.222*** (0.06)	2.474*** (0.16)	1.407*** (0.21)
Adjusted R^2	0.12	0.54	0.57

Note: Reference categories are listed in parentheses. *** p<0.001. Non-standardised OLS coefficients in cells. Clustered standard errors in parentheses.

Table 5: Logistic regression, concrete professional authority (2 Professions)

The US	
Profession (Medical doctor)	- 0.905*** (0.07)
Personal relationship (No relationship)	0.047 (0.08)
Constant	0.963 (0.07) ***
Nagelkerke R^2	0.06

Denmark	
Profession (Medical doctor)	-0.517 *** (0.07)
Personal relationship (No relationship)	0.115 (0.08)
Constant	0.548 ***
Nagelkerke R^2	0.02

Note: *** p<0.001. Odds ratio. Reference categories in parentheses. Logistic regression coefficients in cells. Clustered standard errors in parentheses.