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Diagnosing by anticipation: Coordinating patient trajectories within and across social systems

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Abstract

Anticipation is a fundamental aspect of social life and, following Weber, the hallmark of social action—it means trying to take others' responses to our actions into account when acting. In this article, we propose and argue the relevance of anticipation to the sociological study of diagnosis. To that end, we introduce and elaborate on the concept of *diagnosing by anticipation*. To diagnose by anticipation is to consider diagnoses as cultural objects imbued with meaning, to anticipate how others will respond to their meaning in situ and to adapt the choice of diagnosis to secure a desired outcome. Unlike prognosis, which seeks to predict the development of a *disease*, diagnosing by anticipation entails seeking to predict the development of a *case* and the effect of different diagnostic categories on its trajectory. Analytically, diagnosing by anticipation therefore involves a shift in diagnostic footing, from trying to identify what the case is a case of, to trying to identify which diagnosis will yield the desired case trajectory. This shift also implies a stronger focus on the mundane organisational work of operating diagnostic systems and coordinating case trajectories within and across social systems, to the benefit of the sociology of diagnosis.

KEYWORDS
anticipation, classification, colligation, diagnosis, elasticity

INTRODUCTION

In a debate piece in a Norwegian newspaper, psychiatrist Annette Toresdatter described a recurring clinical dilemma (see Toresdatter, 2017). One of Annette's patients, a man in his fifties, was, by her account, not clinically depressed—he was low but in her view not eligible for the depression diagnosis. However, the man had lost his job and his time-limited unemployment benefit was nearing its end. When the time is up, unemployed persons in Norway are candidates for either a disability pension or social benefits. The former means that your income is preserved but requires that your unemployment status be attributed primarily to a medical condition. If that fails to be the case, you are eligible for social benefits, as long as you first spend your savings and repay any debts (e.g., a mortgage or a loan). *Here is the dilemma*: If Annette does not diagnose the man with depression—a condition she does not believe he has—the man will have to sell his house and relocate, which Annette thinks will cause actual depression. Should she therefore diagnose him as being depressed, or not?

This article is about the *shift in diagnostic footing* that occurs when diagnosticians are faced with dilemmas like the one described by Annette. Normally, diagnosis is understood as a process of identifying the patient's situation in medical terms. While we may doubt the validity of a diagnosis, we typically take for granted that the doctor did try to 'get it right' and that the diagnosis is an expression of that attempt. On this 'normal' mode or footing, then, diagnoses are an expression of what is troubling the patient or of what the doctor thinks is troubling the patient. In Annette's case, she identified the patient's condition as low but, in her view, not depressed. However, Annette's case also highlights a shift in footing, from *identification* to *anticipation*. On this footing, diagnoses are coordinating instruments that significantly influence the trajectory of a case. In line with this, Annette had clear opinions about how different diagnoses would affect the patient's trajectory, and—importantly—the *anticipated outcomes* of diagnosing this or that way became relevant diagnostic warrants.

Thus, whereas diagnosis is nominally about accurately stating the case, the present article centres on situations where diagnosis is more about securing (or avoiding) various anticipated outcomes. We call this diagnostic mode *diagnosing by anticipation*. To diagnose by anticipation is *to classify a case based on the anticipated consequences of the classification*. It is to consider diagnoses as cultural objects imbued with meaning, to anticipate how others will respond to their meaning in situ and to adapt the choice of diagnosis to secure a desired response. Unlike prognosis, which seeks to predict the development of a *disease*, diagnosing by anticipation entails seeking to predict the development of a *case* and the effect of different diagnostic categories on its trajectory.

The shift towards anticipation implies a reorientation of what diagnoses are and what diagnosticians do. As the diagnostician becomes more concerned with consequences and less with accuracy, more preoccupied with utility and less with veracity, diagnoses become the tools diagnosticians use to make things happen; they serve as the *coordinating instruments* that can significantly influence the trajectory of a case. More than expressing the diagnostician's opinion about the patient's health status, then, the diagnosis is about securing (or avoiding) a particular case outcome.

We argue that diagnosing by anticipation constitutes an interesting yet overlooked problem for the sociology of diagnosis. Our aim is not simply to argue that anticipation is a factor in diagnosis—it is a regular feature of the act of forecasting in medicine known as prognosis—but specifically that often, and to varying degrees, the anticipated consequences of using this or that diagnostic category become forceful diagnostic warrants (i.e., reasons for choosing a

classification). Moreover, our point is not that diagnosticians are on one diagnostic footing or the other, but that the latter has not been part of the sociological conception and analysis of diagnosis.

In the following, we theorise and elaborate on this shift in diagnostic footing. The goal is to offer useful conceptual tools that highlight professional practices that are of both academic and societal interest. We begin by discussing the concepts of anticipation and diagnosis, respectively, before moving on to defining and elaborating the concept of diagnosing by anticipation, its character, mechanics, scope and implications.

ANTICIPATION

Anticipation can be defined in numerous ways. It may, for instance, refer to the pleasurable expectation of something about to happen or to the development of ideas or events where a past instance predicts or contains the chime of a future development or to the familiar feeling when you learn that someone has already come up with—and published on—your latest bright idea (on the latter, see Merton, 1961).

Here, we define anticipation as *taking into account or foreseeing a later action or event*. It relies on the innate prospective orientation of the human animal (e.g., James, 1970), but here we take it as a potent concept for sociological theory, both as a problem to explain (e.g., how does the anticipation of future events vary with context?) and as a mechanism of sociological explanation (e.g., as a factor in explaining patterns of diagnostic decision-making on which we will have more to say below).

As an explicit theme, anticipation has traditionally not been at the centre of attention in sociological research and theorising. In recent years, however, there has been an uptake of interest in variations on the topic (Beckert & Suckert, 2021). For the purposes of the present article, the sociological research relevant to anticipation may be fruitfully divided along two axes. Following Beckert and Suckert (2021), the first is between research where anticipation is what the analyst is doing (anticipation as method) and research where it is what they are studying (anticipation as topic). Studies of the former type, sometimes called 'future studies', are not our concern here (but see Andersson, 2018).[1] Our concern is rather with studies of the latter type, which take actors' and groups' 'perceptions of the future' (Beckert & Suckert, 2021) as their topic. As you recall, it was Annette's perception of what would happen to her patient if she did not diagnose him as being depressed that was the source of her dilemma.

'Perceptions of the future' may be further divided along a second axis, according to the sort of future that is being perceived. On one end of the spectrum are studies where actors are anticipating the arrival of *a new way of life* on a smaller or larger scale. In the field of medicine, for instance, genomic editing and decision-making assisted by artificial intelligence are widely anticipated as substantially transformative developments (see e.g., Coote & Joyner, 2015; Hicks & Dunnenberger, 2018; Tutton, 2016). The subfield of science and technology studies called 'the sociology of expectation' belongs here, with its focus on how expectations of future techno-scientific developments impinge on present developments (see e.g., Borup et al., 2006; Brown & Michael, 2003). So does the work on 'anticipatory regimes', modes of governing uncertainty and risk wherein anticipation is an epistemically valued way 'of thinking and living towards the future' (Adams et al., 2009, p. 246).

The type of anticipation we are interested in, however, happens *within* an existing social order and is not geared towards institutional change. It is part of the current way of life and

something actors routinely do—an everyday activity. When Annette anticipated the trajectory of her patient's case with and without a diagnosis of depression, what she had in mind were future events within the current social arrangement—she anticipated the normal operation of the existing scheme and a typical response of patients to distressing circumstances. In the same way, when social scientists submit a manuscript to a top-ranking journal, we often anticipate rejection (and therefore have a plan about where to submit next). The future in which we anticipate rejection is, phenomenologically speaking, the same social reality as the one we currently inhabit.

In this sense, even if the term is not widely used, the *idea* of anticipation has always been important in sociology. It is, for instance, a central part of Weber's definition of social action as acting with a view to 'the past, present, or *expected future behaviour* of others' (1978, p. 22 our italics). Annette was considering her actions as a diagnostician with a view to the future behaviour of bureaucrats and her patient. Likewise, anticipation is a pivotal concept in a wide range of sociological approaches, including rational choice theory, wherein the central explanatory mechanisms hinge on the predicted utility of various courses of action (e.g., Coleman, 1990; Elster, 1989; Schelling, 2006), and approaches like phenomenology, pragmatism and symbolic interactionism, wherein actors are theorised as 'projecting' the outcomes of their actions upon undertaking them (Beckert & Suckert, 2021). The perhaps most encompassing role given to anticipation is found in the work of Alfred Schutz (1967, pp. 57–63), wherein anticipation is at the heart of all action. Indeed, according to Schutz (1967, p. 62), action is 'projected behaviour', which is to say *behaviour plus anticipation*.

Being at the core of sociological approaches to (inter)action, anticipation is also heavily conditioned by social structure—by culture, convention and habit. Although the propensity to project is no doubt a natural endowment, many forms of anticipation are taught and learnt in primary and secondary socialisation and in vocational or professional training (see e.g., Rees, 2011). Moreover, types of events and actions that actors routinely anticipate will vary according to status position, and structural arrangements can both foster and support the patterned occurrences of events and actions and feedback loops that allow the actor to evaluate their anticipations in hindsight. The fact that Annette is a trained psychiatrist who works in a scheme that facilitates recurring encounters with similar cases and produces feedback loops for her cases, significantly shapes her anticipatory practices.

The work that is closest to our usage of anticipation is that of Iddo Tavory (Tavory, 2010, 2018; Tavory & Eliasoph, 2013). Whereas the classic critique of interactionism's focus on ongoing interaction is that it places too little explanatory weight on past encounters, Tavory (2010) extends this critique to include the future, arguing that situational encounters are heavily affected by our anticipations of future encounters, particularly our learnt and habitual anticipations. The point is 'that to understand the situation ... we must understand it in relation not only to past-induced habits of thought and action but to future situations anticipated in interaction' (Tavory, 2018, p. 117). We need to think, as he says, 'between situations' (Tavory, 2018).

Following Tavory, we aim to theorise the kind of diagnostic work that goes on 'between situations.' What we want to do is to show how anticipation becomes important in diagnosis when diagnosticians take the anticipated consequences of diagnosing this or that way into account. Before elaborating this approach of 'diagnosing by anticipation', however, we must briefly establish what is conventionally understood by 'diagnosis.'

DIAGNOSIS

The core concept of this article, 'diagnosing by anticipation', requires us to go beyond what we might call the 'received view' of diagnosis: In medicine and in sociology alike, diagnosis is typically conceived as being an activity centred on *identification*, whereby '[t]he key cues to a patient's problem—whether from the medical history, physical examination, x-ray studies, or laboratory tests—coalesce into a pattern that the physician identifies as a specific disease or condition' (Groopman, 2007, p. 34).

Sociologists have of course greatly challenged the underlying positivist notion of diagnosis as disease identification—not least in the sociology of diagnosis. The 'cues' of a case do not simply 'coalesce into a pattern' but are actively established by the examining diagnostician. This requires interpretation (Leder, 1990), which doctors are trained to do according to culturally and historically variable conventions (Davenport, 2011; Dodier, 1998; Fleck, 1979; Freidson, 1970a; Löwy, 1988; Montgomery, 2006). Furthermore, it requires the production and ordering of cues *as* cues to an underlying medical condition, which itself requires the diagnostician to draw on established discourses and practices that allows the separation of symptoms from signs and the subjective from the objective (Atkinson, 1995; Daston, 1992; Fleck, 1979; Foucault, 1994) and on the bulk of disease categories that have been produced up until that point (Armstrong, 2011; Brown, 1995; Jutel, 2011).[2] Moreover, sociological analyses emphasise that diagnoses do much more than just give a name to identified conditions: Diagnoses organise activities and understandings across time and space (Jutel, 2009; Jutel & Nettleton, 2011; Strauss et al., 1985), maintain and challenge power relations (Armstrong, 1983; Freidson, 1970b) and enable standardisation (Bowker & Star, 2000; Timmermans & Berg, 2003) and bureaucratic control (Harrison, 2009; Harrison et al., 2002), to give but a few examples.

Yet for the most part, even constructivist (Atkinson, 1995), discourse analytic (Foucault, 1994) and ontologically heterogenous and multiple (Mol, 2002) modes of doing sociology retains the notion of diagnosing by *identification*. The goal of diagnosis is to identify 'what is happening to the patient' (Llewelyn et al., 2014, p. 26).

In this article, we theorise a different diagnostic footing centred less on identification and more on *anticipation*. Our reference to this as a shift in diagnostic 'footing' is inspired by Goffman (1981, Chapter 3), who proposed the concept of footing to capture changes, often multiple and miniscule, 'in our frame for events' (1981, p. 127), or a shift in stance that gives a change in point of view. Following Goffman, such shifts can be taken but also imposed or situationally implied or invited. By highlighting this shift in diagnostic footing, our goal is not to replace the view of diagnosing by identification but to extend the sociological grasp to better capture diagnostic modes where identification is not the only—and sometimes not even the primary—goal of diagnosis. Let us therefore turn to the concept of diagnosing by anticipation.

DIAGNOSING BY ANTICIPATION

Diagnoses have consequences. They indicate an illness trajectory, provide an illness identity and ensure access to goods such as certain types of professional attention, care, medication, claims and benefits—to name but a few examples. We refer to these consequences of diagnostic classification as a diagnosis' *coordination effects*.

When diagnosing by anticipation, the diagnostician (1) anticipates or imagines the coordination effects of one or more diagnostic classifications and then (2) uses these anticipated

consequences as *diagnostic warrants*—as reasons for choosing this or that classification. To diagnose by anticipation, therefore, is *to classify a case based on the anticipated consequences of the classification*. It is a mode of diagnosis where the diagnostician is motivated by, or habituated towards, attaining or avoiding certain outcomes of the classification of a case. In diagnosing by anticipation, therefore, attention shifts from the identification of the patient's problem to the anticipated consequences of different diagnostic choices. Hence, in addition to the standard 'What is this a case of?' the diagnostician asks, figuratively, 'What will happen if I use this diagnosis or that diagnosis?' or 'What diagnosis will ensure the desired trajectory in this case?'.[3] Diagnoses then shift from being the names or descriptions of what the case is a case of to become coordinative instruments that the diagnostician uses strategically towards various ends, just as the very aim of diagnosis becomes the control or steering of case trajectories—within or across social systems, within or across jurisdictional boundaries.

In the terminology of the sociology of diagnosis, then, diagnosing by anticipation entails the *process* of taking into consideration of how a *category* will be responded to (Jutel & Nettleton, 2011). However, while discussions about diagnosis tend to centre on formal categories, our concept of diagnosing by anticipation operates with a wider conception of diagnosis that encompasses *all forms of professional definitions of the situation*. This includes not just categories but written and oral narratives (e.g., medical certificates or a paramedic's 'epicrisis' to emergency staff); and not just formal diagnoses but informal ones too (e.g., Dobransky, 2009; Hughes, 1977; Jeffery, 1979). What they have in common, and what we require to include them, is that they are organisationally efficacious (by coordinating actions and beliefs) and that one of their functions is to communicate a professionally determined situational definition (i.e., a description of what is going on with the patient). As we illustrate below, we see this broadening of 'diagnosis' as an analytically salient move for increasing the relevance of the concept of diagnosing by anticipation—and the sociology of diagnosis more generally.

Colligation and classification

To further clarify the concept of diagnosing by anticipation and how it differs from diagnosing by identification, we draw on Andrew Abbott's (1988, p. 41) distinction between two aspects of diagnosis, namely *colligation* and *classification*.[4] According to Abbott, a professional diagnostician must perform two related but analytically separate operations. First, they must sort and compile the available information into a coherent picture or story, and the process of getting there is what Abbott calls colligation. The 'facts of the case' must be produced and compiled, and then sorted and assembled according to conventional relevance criteria and learnt guiding principles. Second, once the diagnostician has a clear idea of what the case is, that idea must be translated and expressed using the legitimate and shared terminology of their profession. The process of finding the appropriate description among those available to them is what Abbott calls classification. In simple terms, then, colligation answers the question 'what is the patient's problem?', whereas classification answers the question 'what should we call the patient's problem?'.

The strength of Abbott's distinction is that it separates analytically the cognitive aspect of diagnosis from the organisational aspect.[5] It highlights that the individual diagnostician must relay their thinking about a case to others and that they must do so using established and conventional categories and discourse. Diagnoses are embedded in bureaucratic structures as 'pigeonholes' that tie individual cases to more or less standardised pathways (Mintzberg, 1989) and they are associated with narratives and identities as cultural objects (Album et al., 2017; Grue

et al., 2015; Kelly & Field, 1996). While we are certainly not claiming that the bureaucratic and organisational function of diagnoses is new to scholars in the sociology of diagnosis or the sociology of health and illness, this awareness has yet to be incorporated into current sociological theorising about diagnosis.

How does Abbott's distinction relate to our shift in diagnostic footing? On the normal footing, colligation (identification) leads to, or directs, classification—the task of classification is to find the diagnosis that best corresponds with the colligated picture of the case. The diagnostician works to accurately place the picture into 'the dictionary of professionally legitimate problems' (Abbott, 1988, p. 41). This is indeed how we expect diagnosticians to behave—we expect the colligation of the case to guide its official classification.

When diagnosing by anticipation, however, colligation and classification become disconnected—or at least less tightly knit. The diagnostician becomes more concerned with diagnostic consequences and less with accuracy, more preoccupied with utility and less with veracity. And, importantly, the diagnostician *acts* based on their anticipations. We are not, therefore, saying that to diagnose by identification implies a lack of interest in diagnostic consequences, but rather that the anticipated consequences are not fed back into the choice of diagnostic category or narrative. In diagnosing by anticipation, however, they are.

By way of illustration, let us imagine that our psychiatrist, Annette, chose to diagnose her patient as being depressed—even if she did not believe he was—and that her reason was the anticipated outcome of withholding that diagnosis (i.e., setting the patient on a path that she thought would actually make him depressed). Schematically put, Annette was faced with two classification options, A (not depressed) and B (depressed). Option A corresponds to her colligation of the patient's symptoms but is anticipated to put him on a trajectory that she finds problematic and wants to avoid. Option B does not correspond to her colligation of the patient's symptoms but is anticipated to put him on a more desirable track (and, in Annette's case, she expects that trajectory A will eventually lead to depression anyway). In choosing option B, Annette would be diagnosing by anticipation—she would be classifying in disconnect with her colligation of the patient's symptoms.

Thus, when diagnosing by anticipation, it is not (or not only) the diagnostician's interpretation of the presenting *symptoms* that determine their classification but (also) their interpretation of the *case trajectory* that they anticipate will result from their classification. The latter relates to what we above referred to as diagnoses 'coordination effects' (i.e., how the choice of diagnosis entails a series of consequences). To anticipate a case trajectory, the diagnostician must anticipate how other people—for example, patients, relatives or other professionals—will respond to various diagnoses. This requires an understanding of these others' context of interpretation—the rules, codes and conventions that apply. The anticipation, then, in diagnosing by anticipation, consists in the colligation of future events, namely how generalised or particular others will respond to a particular classification.[6]

Temperance, legitimacy and elasticity

The potency of diagnosing by anticipation comes from there being a gap between what the diagnostician thinks and says (i.e., a discrepancy between colligation and classification)—either because the diagnostician is unsure about what it is but nevertheless gives a definitive answer or because they think the answer is different from the one they give. Importantly, however, that gap cannot be a gorge. Diagnosing in ways that are plainly at odds with the facts (e.g., classifying

a runny nose as acute brain cancer) would implicate the diagnostician in fraud or gross misconduct, thus inviting fines, revoking of licences or criminal charges for the individual professional, as well as control measures and reduced autonomy for the professional group.[7]

In contrast with outright misbehaviour, diagnosing by anticipation is a *tempered* activity that thrives in the 'grey areas', where the choice between diagnostic alternatives is not obvious to observers and where diagnosticians do not consider themselves straying *too* far from the professional or community-approved response to the relevant symptoms and signs in choosing one over the other. Calling something a tempered activity is to say that it is self-restrained relative to a set of boundaries. The boundaries separate, albeit with fuzzy and broad demarcation, what is considered professionally legitimate action from what is not—stretching it but not too far.

The role of temperance in diagnosing by anticipation, then, is to ensure that the diagnostician acts within a sphere of professional legitimacy. That sphere, however, is *elastic*.[8] By elasticity we refer to a degree or quality of flexibility in interpretation and action, a space for discretion. As we define it here and as applied to diagnosis, this flexibility is not a characteristic of particular clinical signs and symptoms nor of individual categories and classification systems (but see Conrad & Potter, 2000), but of the overall 'diagnostic situation' wherein these and other factors—including organisational, regulatory and moral factors—are brought together and converge into a professional and conveyable classification. As such, what we might call 'diagnostic elasticity' is a relational phenomenon that has the diagnostic situation or context at its centre. We might, for instance, expect a psychiatrist to be less inclined to 'stretch depression'—that is, to find themselves in a somewhat less elastic sphere of legitimacy—if the diagnosis was only to be used for mental health statistics or to plan a treatment course for a patient with comorbidities. Diagnostic elasticity is situational.

A myriad of factors will likely lead to more elastic diagnostic situations and thus more diagnosing by anticipation, of which the most general can be addressed. Among them are *uncertainty* and *ambiguity*, such as when diagnosticians are unsure which classification would most accurately correspond with their colligation or unsure about what the patient has but convinced that it is not very serious. In such cases, classifying based on anticipated outcomes is less of a stretch.

Relating to that is the *semantic difference between the diagnostic options*, from the point of view of the diagnostician. To most, the difference between 'low' and 'depressed' is smaller than between 'perfectly well' and 'depressed', and smaller distances require less stretch. The boundaries between diagnoses in diagnostic manuals are, moreover, often intentionally blurred by including criteria that relies on the diagnostician's pragmatic judgement (Allsopp et al., 2019), which makes stretching easier. Adding to that is the *relative difference in the anticipated outcomes* of the diagnoses and the degree to which the diagnostician finds it (un)acceptable. Annette's case, we surmise, was a dilemma precisely because the difference in outcomes was found disproportionate to the difference between 'depressed' and 'low.' In insurance cases, austerity measures are likely to increase disproportionality of this sort.

Finally, the diagnostician may, for various reasons, expect certain classifications to be *misused or misunderstood* at the next junction, thereby causing the case to take—in the diagnostician's view—a wrong turn. For instance, diagnoses are often relayed across professional or systemic boundaries, and the diagnostician may expect that differences in professional training or context will make the recipient prone to draw the 'wrong conclusion' from this or that classification. Likewise, colligation may imply classifications that are stigmatised or have been subject to public controversy (Aronowitz, 1998), which can result in undesirable consequences such as unhelpful patient identities or threats to professional authority. For various reasons, therefore, the diagnostician may worry that the otherwise most apt classification is also one that can result in misuse

or malfunction. To avoid this, the diagnostician may classify in ways that are expected to produce less friction or slippage.

AN ILLUSTRATION (AND ORIGIN STORY): MEDICALLY UNEXPLAINED SYMPTOMS

To further elaborate the concept, we will now provide an example from a small qualitative study into 'medically unexplained symptoms' (MUS) in the context of primary care, in which 'diagnosing by anticipation' was originally proposed (Rasmussen, 2017, 2020b).[9] MUS is a category of symptoms that are widely held to be ambiguous in their nature, cause and treatment (Greco, 2012; O'Leary, 2018). In cases of MUS, the patient presents with some symptom or set of symptoms, but clinical examination yields no biomedical evidence to corroborate them (Jutel, 2010; Nettleton, 2006).[10] From before, Rasmussen had read about MUS referred to as 'illness that cannot be diagnosed' (Jutel, 2010, p. 230) and 'symptoms that cannot be classified' (Kornelsen et al., 2016, p. 367), but this is only true in a very restricted sense of diagnosis and classification. At least to the general practitioners (GPs) in Rasmussen's study, each patient obviously had to be diagnosed and routinely was using WHO's *International Classification of Primary Care* (ICPC-2). For one, classifying using this manual is how the GPs got paid for the consultation (Brage et al., 1996). Monetary concerns aside, the GPs were concerned with providing patients with useful answers and with the appropriate reception of the patient's case in the national health insurance scheme. Although diagnosis was rarely straightforward in these cases, therefore, the GPs had little problem giving examples of how they went about classifying MUS.

In discussing their classificatory practices, GPs distinguished between 'good' and 'bad' diagnostic categories (referring either to names such as fibromyalgia or ICPC-2 codes such as L18). What made diagnoses good for MUS, it turned out, were two things. A good diagnosis for MUS is, firstly, one that does not say more than is medically warranted. Descriptive 'symptom diagnoses' that did not hint at an underlying condition or disease mechanism—such as A04 'weakness/tiredness general' and P02 'stress reaction'—were therefore preferable. Secondly—and this is where diagnosing by anticipation comes in—good diagnoses were those the GPs anticipated to yield good, or at least to avoid harmful, coordinative effects. In diagnosing MUS, these two criteria were sometimes at odds. Sometimes, for instance, diagnoses such as fibromyalgia or myalgic encephalopathy—which the GPs often devalued because they imply some underlying condition and thus say more than the GPs thought was medically warranted—were nevertheless anticipated to have beneficial effects. Based on the GPs' talk, these anticipated consequences often outweighed their desire to err on the side of caution—they took action in the form of diagnosing by anticipation.

Two types of anticipated trajectory stood out in the GPs' discussions about diagnosing MUS, relating to patient's illness biographies and the patient's case in the national insurance scheme. Starting with the patients' *illness biographies,* this involved the GP asking how patients would respond to this or that category, and if that response was beneficial. When considering such questions, the GPs would sometimes let the concern with outcomes outweigh their concern with validity. For instance, Rasmussen interviewed a doctor who 'disliked' fibromyalgia on technical grounds (believing that fibromyalgia is not actually 'a thing' anyone 'has') yet saw merit in the diagnosis because of its ability to bring 'closure' for patients and thus allow them to move on (Rasmussen, 2017, pp. 1234–1235). For similar reasons, another doctor sometimes used myalgic encephalopathy—to bring closure and ward off uncertainty—whereas two other doctors

cautioned against using it as they expected that it would cause the patient to give up rather than carry on (Rasmussen, 2017, p. 1234). The point is that they all justified their classification based on the anticipated outcomes of diagnosing this way or that, and, importantly, not (primarily) based on what they felt would best correspond to their colligation of the presenting symptoms. Contrary to the received view, then, the GPs took the patient's reception into consideration as a diagnostic warrant. The diagnosis, that is, was chosen to ensure or avoid a certain outcome.

The second anticipated trajectory related to the patients' case in *the national insurance scheme* and involved asking about how different diagnoses would be interpreted and acted upon by case workers. When considering this, the GPs on occasion faced predicaments similar to that of psychiatrist Annette, where certain rights and benefits are contingent on some underlying disease being the primary cause of the patient's inability to work. In these cases, the GPs anticipated that some diagnostic categories would more readily convince case workers in the insurance system that disease was the primary cause. Again, even though they generally preferred overtly descriptive diagnoses such as 'muscle pain' or 'stress reaction', they anticipated better outcomes from diagnoses such as 'fibromyalgia' or 'neurasthenia'—which they expected the case workers to accept more as proper medical conditions (Rasmussen, 2017). The GPs therefore at times reportedly opted to use these categories *because of their anticipated effects*. As with the illness biographies, they did not necessarily agree on which categories would do the job, but they agreed that diagnostic consequences were a legitimate professional concern in classification for insurance purposes.[11]

In line with our broadened view of diagnosis, it should also be noted that when discussing their communication with case workers in the national insurance, the GPs were concerned not just with which formal diagnostic category to convey (e.g., 'fibromyalgia' or A04 'weakness/tiredness general'), but also with the narrative description of the entire case in the medical certificate. Specifically, the GPs reported putting effort into constructing a documented version of the case (a classification) that would ensure the type of outcome the GP felt was appropriate. In practical terms, this meant downplaying or excluding information that was relevant to the GP's colligation but which the GP worried would be misunderstood or misused by the caseworker. Information about the patient's family life or economic situation, for instance, were so-called 'social factors', and according to the national insurance scheme not valid causes for sickness absence or loss of capacity for work (Rasmussen, 2020b). Even if the GP felt that this information was important to a proper professional understanding of the patient's predicament, therefore, they would take steps to prevent misuse of the information. Likewise, the GPs would indicate causal connections between life events and the presenting symptoms, even if they themselves were not convinced of such a causal connection. For instance, it could be beneficial to describe symptoms of tiredness and pain as caused by childhood trauma—even if the GP was unconvinced that there actually was a causal connection and rather believed that a patient was simply of a fragile type.[12] What these examples show, then, is how GPs constructed their medical definition of the situation with a view to ensure the desired outcome of the case trajectory.

While the GPs' intents can be inferred, more or less, from the outcomes they tried to avoid or achieve, Rasmussen's study says little directly about whether they tended to succeed. It does, however, suggest that the context of the GPs work—that is, the structure of primary care and health insurance in Norway—gives them recourse to improve their anticipations in the form of various feedback mechanisms. First, they frequently encounter patients with MUS and therefore have ample chances to consider how diagnosis impacts these patients' identities and illness biographies. Secondly, GPs are regularly informed that the caseworker is unsatisfied or in disagreement with their definition of the situation, which gives GPs a chance to refine their anticipations

with regards to the insurance system—what categories are convincing, what narratives work, and so on. And third, as aspiring or certified specialists in general medicine, the GPs were required to participate in regular peer groups as part of a continuing medical education programme (see The Norwegian Medical Association, 2018). As GPs usually practice alone or in small surgeries, the peer groups ensure opportunity for collegial exchange and venting. Challenging cases such as MUS, including ways of handling them, was a frequent topic of discussion in the peer groups of the GPs in Rasmussen's study. As such, the groups enabled shared learning from individual experiences with patients and caseworkers.

SCOPE OF THE CONCEPT

Having described the original and perhaps 'prototypical' case, we will now draw in some other examples from the literature to consider the concept's scope and limitations. First, although the concept originated in a study of MUS in primary care, there are signs of, and reasons to assume, a wider prevalence. For one, and as already indicated, diagnosing by anticipation is seemingly commonplace in psychiatry (which is where Annette's dilemma was from). Examples include a study by Kovshoff et al. (2012), which shows diagnosticians taking various pros and cons of classifying school children with ADHD as diagnostic warrants and a study by Allsopp (2017, p. 173), which describes how psychiatrists (and GPs) '(...) often record diagnoses with a view to reaching an intended outcome for what they believe their clients need (...) such as giving them access to a particular intervention that would otherwise not be available to them.' Likewise, psychiatrists in a study by Whooley (2010, p. 460) give accounts of choosing 'acceptable' diagnoses for patients for insurance purposes—but with a characteristic emphasis on not 'distorting' or 'fudging' (what we call 'stretching') the classification *too* far.

Second, while psychiatric patients and patients with MUS can be said to constitute 'soft cases' (due to the 'lack' of biomedical evidence of the sort that passes for objective), diagnosing by anticipation is not limited to such cases. As stated, we take elasticity in diagnosis to be a relational quality of the overall 'diagnostic situation' more than a quality of individual symptoms or categories. Given the right circumstances, therefore, 'hard cases' (where biomedical evidence is not found wanting) can become elastic. One such situation is described in Dam et al.'s (2022) study of oncologists' thoughtful selection for early-stage non-curative experimental treatment, wherein terminal cancer patients were classified as 'fit' or 'unfit' for clinical trial participation. 'Fit' patients were put on the waiting list for the trial, whereas 'unfit' patients were excluded. A core criterion for 'fitness' for the trial was being relatively asymptomatic, which excluded most of the patients. Even if the trial was non-curative and held little promise of positive effects, patients were eager to participate as it represented a measure of hope. Consequently, some patients who were far from asymptomatic nevertheless expressed a strong desire to be put on the waiting list, and the oncologists therefore on occasion classified them as 'fit.' The oncologists justified the practice out of concern for helping patients cope with distress, and because there was a good chance that the patient would nevertheless not live to make it to the treatment phase.[13] In other words, the oncologists anticipated the potential for some good and little harm and used this as a warrant for classifying 'against' their colligation.

Another example with 'hard cases' is from the activity-based financing system in Norwegian hospitals, where Diagnosis Related Groups (DRGs) play an important role. DRGs are groups of diagnoses that involve circa the same cost per patient, and different DRGs therefore yield different rates of payment to the diagnostician's hospital section. The prescribed procedure is

that doctors first colligate, then classify using codes in the ICD-10, then report the code in the DRG-system—thus ensuring that diagnosis and reporting, medicine and administration are kept separate (Tøndel, 2010, p. 248). In practice, however, these activities are intertwined. For one, Tøndel's (2010) study suggests that diagnosticians will sometimes take the (anticipated) rate of pay received for different codes as a warrant for classification in the ICD-10. Interestingly, though, the practice is tempered by a concern with whether the chosen classification will adversely affect the patient, as part of their record. Thus, the DRG system creates an overall diagnostic situation wherein two justifications for diagnosing by anticipation—boosted budgets and patient wellbeing—create a tension for the diagnostician to resolve.

Thirdly, as exemplified with the case of DRGs, there are concerns other than for patient wellbeing that motivate or justify diagnosing by anticipation. One such concern is with the allocation of patients within and between health-care services and organisations. The extreme version is described in *The House of God* (Shem, 2010 [1978])—a popular novel that albeit sharply satirical is nevertheless widely perceived by health-care workers to capture something real and important about medical practice (e.g., Mizrahi, 1985, p. 233). The book describes medical hospital work as centred mainly around practices of 'turfing', 'bouncing' and 'buffing.' The three concepts are explained most clearly in the following passage, in which a senior resident—'Fats' or 'The Fat Man'—explains the workings of hospital wards to a group of interns:

> Fats explained how to goal of the [in]tern was to have as few patients as possible. [...] The delivery of medical care consisted of a patient coming in and being TURFED out. It was the concept of the revolving door. The problem with the TURF was that the patient might BOUNCE, i.e., get TURFED back. For example, a gomer [acronym for "Get Out of My Emergency Room", i.e., an undesirable patient] who was TURFED TO UROLOGY because he couldn't urinate past his swollen prostate might BOUNCE back to medicine after the urology intern with his filiform probes and flexible followers had managed to produce a total body septicemia, requiring medical care. The secret of the professional TURF that did not BOUNCE, said the Fat Man, was the BUFF.
>
> We asked what was a BUFF.
>
> "Like BUFFING a car", said Fats. "You gotta BUFF the gomers, so that when you TURF them elsewhere, they don't BOUNCE back".
>
> (Shem, 2010, pp. 47–48)

'Turfing' can be reframed as diagnosing by anticipation in cases where the classification is geared towards moving or pushing the responsibility for patients onto other actors, organisations, or systems. The logic is simple: some diagnoses make the patient eligible for the diagnostician's ward, whereas other diagnoses make the patient eligible for other wards. Note, however, that even in satire we see *some* element of restraint—'turfing' to urology was based on a *reasonable* classification (the patient did have problems passing water). What makes the satire extreme is not the practice as such, but its uncandid and cynical justification. (The case also illustrates how 'hard' cases can become elastic.)

More benign examples of 'diagnosing-by-anticipation-as-turfing' are also available. For instance, Allsopp (2017, pp. 163–164) describes how patients whose primary diagnosis was 'personality disorder' could formally not be sent to specialised forensic or secure mental health

services. At the same time, the generalised community services often had a heavier caseload. Thus, Allsopp's diagnosticians would sometimes classify with a view to getting patients the specialised services they otherwise did not qualify for. That way, they could have them transferred ('turfed') to the specialists without too much waiting and without adding to the burden of the general services.

A final example shows another important topic of concern for diagnosticians, namely epistemic authority. In Rees's (2010, 2011) study of forensic expertise in sexual assault cases, the Forensic Medical Examiners (FMEs) were concerned with how their classification of present or absent signs of physical harm would be interpreted in criminal justice contexts. In contrast with the common perception that sexual violence produces a range of injuries upon the body of the victim, the FMEs considered present *and* absent signs of physical injury to be a poor indicator of sexual assault (Rees, 2010). Ultimately, the FMEs thus did not feel that they, as medical professionals, should weigh in on the question of consent in a criminal trial context. They therefore generally produced 'Neutral Reports' (Rees, 2010); forensic statements that neither confirm nor deny the allegation of sexual assault. While Rees did not explore the FMEs' unofficial take, we assume that, on occasion at least, they interpreted the injuries in individual cases as more or less consistent with non-consensual sex. For our present purposes, however, what matters is that they, based on the anticipated consequences of their injury classification, nevertheless worked hard to communicate that the forensic evidence neither supports nor undermines the prosecution.[14] Neutral reporting thus upholds the status of forensic medicine as being independent from criminal justice—but at the expense of the profession's relevance in the societal management of sexual assault.

Taken together, we get the rough outline of a concept that captures diagnostic practices that occur in various settings (primary care; psychiatry; oncology wards; and forensic medicine), for various reasons (to help the patient cope, get help or get by; to protect the diagnostician or others from more work; or to maintain epistemic authority) and in various diagnostic formats (formal and informal, categories and narratives). This tells us that diagnosing by anticipation can be a practice to look for and a concept that can guide our inquiries.

SUMMARY AND CONCLUDING REMARKS

Anticipation is a fundamental part of social life and a key concept in sociological theory. In this article, we have theorised and elaborated 'diagnosing by anticipation' as a distinct mode of diagnosis whereby cases are classified based, partly or wholly, on the anticipated consequences of the classification—or, more specifically, the anticipated outcomes of *communicating* the classification to specified or general actors (or 'interpreting systems'). On this footing, the goal of diagnosis is steering the case trajectory, which highlights the role of diagnosticians as operators of organisational pigeonholes and frames diagnoses as mechanisms by which operators can make things happen. We have also specified the unique character of this diagnostic mode by drawing on Abbott's distinction between colligation and classification and further specified its nature as a restrained and situated activity. Finally, we have presented and discussed findings from the study where the concept originated and given a host of examples to illustrate its scope.

In closing, we make a few remarks on the implications of diagnosing by anticipation, both as a diagnostic practice and as concept for sociological analyses of such practices.

Societal implications of diagnosing by anticipation

Diagnosing by anticipation is an outcome-oriented activity, yet we must distinguish carefully between anticipated and actual outcomes. First, even if the diagnostician's goal is the pragmatic

steering of a case trajectory, the classification *as diagnosis* is still subject to the social alchemy of the 'Thomas theorem' (Merton, 1948): When taken as real, as a professional definition of the situation, a diagnosis becomes real in its consequences—whether regarding the patient's identity, their access to treatment and services, entry into administrative records, the production of statistics and scientific data and so on. Although some such outcomes are of course intended, it is unrealistic to assume that diagnosticians are able to consider—and more so, manage accurately to anticipate—*all* the various consequences of their classification.

Among those consequences that diagnosticians are least likely to consider is their contribution to changing the very diagnoses they put to elastic use—when used for different things, diagnoses also become representative for new cases and receptacle for new information, resulting in what Lane (2020) has called a broadening of diagnostic categories (see also Allsopp, 2017, p. 175; and Rasmussen 2020a).

Another difficult-to-spot consequence has to do with a typical (but not ubiquitous) motivation for diagnosing by anticipation, namely when diagnosticians are actively opposing or averting some perceived malfunctioning of a social system. Rasmussen's GPs were, for instance, of the view that some pieces of information would be misunderstood by caseworkers and should therefore be shared restrictively. We make no effort to evaluate such practices here but note instead that if the problem is system malfunction, then diagnosing by anticipation is surely not a way of fixing it. Rather, it is a case-by-case workaround (Gerson & Star, 1986). If diagnosticians use diagnoses to avoid what they think are operative malfunctions of a social system, they are simultaneously covering up the problem (see also Rasmussen, 2020b, p. 6–7). For better or for worse, diagnosing by anticipation thus turns what could otherwise have been forceful critique—exemplified by debate pieces such as Annette's—into a form of institutional conservation.

Bearings of diagnosing by anticipation on the sociology of diagnosis

The concept of diagnosing by anticipation has important bearings on the sociology of diagnosis. First, it implies a stronger focus on the mundane organisational work of operating classification systems and coordinating case trajectories within and across social systems—a core activity centred around diagnosis about which the sociology of diagnosis has had too little to say (see also Seim, 2022).

Second, building on that, in contrast to how diagnoses are normally portrayed as categories professionals think *with*, diagnosing by anticipation also highlights their function as categories to think *about*, as public cultural artefacts and bureaucratic entities of which people have opinions. This reflexive step back separates the cognitive and the organisational in a way that underlines the mundane role of diagnosticians as operators of the pigeonholes of complex systems.

Finally, and to end on a more radical note, we see diagnosing by anticipation as an example of a concept that applies to *all professional work*. It requires no grand effort, for instance, to imagine this diagnostic practice occurring in police work, social work or teaching, where, like medicine, the space for discretion is sizeable and the definition of the situation is highly efficacious with regard to case trajectories and outcomes—such as client identity, access to resources and rights and so on. This suggests that the sociology of diagnosis should consider expanding out from the sociology of health and illness and joining forces with the sociology of professions, for which diagnosis is a *general* problem (Abbott, 1988). Moving forward, then, we invite further explorations into the mapping and theorising of diagnosing by anticipation in the field of health and beyond.

AUTHOR CONTRIBUTIONS

Erik Børve Rasmussen: conceptualisation (lead); project administration (lead); writing – original draft (lead). **Lars E. F. Johannessen**: conceptualisation (supporting); project administration (supporting); writing – original draft (supporting). **Gethin Rees**: conceptualisation (supporting); project administration (supporting); writing – original draft (supporting).

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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ENDNOTES

[1] Studies aiming to predict human behaviour—which are a minority in sociology but not in economics, epidemiology, and public health—could also be framed as anticipation as method.

[2] Sociologists are, of course, not alone in having pointed out the culturally and historically variable character of medical knowledge and practice, including diagnosis (see e.g., King, 1982; Rosenberg & Golden, 1992).

[3] Over time, of course, experience and habit replaces the need to ask such question.

[4] Abbott's theory is not limited to medicine but conceptualises diagnosis as a core activity of all professions, in addition to the activities of treatment and inference.

[5] By 'cognitive', we are not referring to a purely mental domain. Culturally patterned cognition is still cognition.

[6] In fact, when diagnosing by anticipation, we could speak of a dual set of colligations, one for the presenting predicament that needs a diagnosis (C_P) and one for the trajectory that will result from a diagnosis (C_T). In diagnosing by identification, classification follows from C_P, whereas in diagnosing by anticipation, classification follows from C_T. If so, when diagnosing by anticipation, classification involves a disconnect C_P, but not from C_T.

[7] The phrasing 'plainly at odds' should be read as 'plainly—from the point of view of members of the relevant professional community—at odds.'

[8] We thank one of our anonymous reviewers for reminding us of the metaphor of elasticity.

[9] The study drew primarily on data from focus groups and follow-up interviews with general practitioners (GPs) in Norway. Norway's largely universal and predominantly publicly funded health-care system can be divided into primary care and secondary care, where the former is the responsibility of the municipalities and the latter the responsibility of the State. GPs play a crucial role in both, as providers of primary care in privately run but publicly funded clinics, and as coordinators of patients' medical needs across providers in primary and secondary care.

[10] Although estimates vary (tremendously in some cases), it is generally agreed that MUS are among the largest categories of complaints in primary care (O'Leary, 2018).

[11] 'Legitimate' is used here in a bounded form. The GPs did not share these forms of diagnostic reasoning with either patients or case workers. Had they done so, we assume, the 'trick' of diagnosing by anticipation would no longer work; the patients would not find security or peace with a diagnosis given for such pragmatic reasons nor would the case workers accept (or appreciate) medical information that was conveyed for 'purely rhetorical purposes'.

[12] Shutzberg (2019) observed additional types of strategy employed by Swedish GPs to get a medical certificate accepted (in a largely similar health insurance scheme to Norway's), including 'exaggeration and quasi-quantification' of case facts to make the predicament more severe or objective-sounding; 'depersonalization of the patient voice' whereby the patient is concealed as the source of case facts, which could otherwise potentially cast the diagnosis in doubt; and the use of 'buzzwords' or phrases and words that seem to work well.

[13] Dam et al. (2022) talk about the oncologists 'unknowing' that the patient is unfit, which, we think, is a different way of talking about how elasticity is achieved. But we add that the diagnosticians in Rasmussen's study, not to mention in Allsopp (2017) and Whooley's (2010) studies, seemed more knowing that unknowing that they operated in a grey area.

[14] See also Mulla (2014) who highlights the 'anticipatory modality' of forensic medicine.

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