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The argumentative role of patient companions in (shared) decision-making☆

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ABSTRACT

Objective: This study aims to examine the type of involvement of patient companions in the argumentative exchanges in consultations and explore when their contributions should be taken into account in shared decision-making (SDM).
Methods: A qualitative analysis was carried out using transcribed medical consultations (N = 10) between health professionals (doctors at a regional Dutch hospital), adult patients and informal patient companions. Insights from argumentation theory were used to develop an inventory of twelve theoretically distinct discussion situations involving patient companions, distinguishing possible discussion roles, disagreement types and coalition formations.
Results: Consultations contained on average 4.3 discussion situations. In most discussions (37.21 %) the health professional adopted a standpoint, and the patient and their companion only expressed doubt. More complex cases occurred when one of the three parties, including the companion, opposed opinions of the other parties (in 34.88 % of the situations found) and when coalitions were formed (possible in 18.60 % of the situations found). We found that disagreements occurred or were anticipated by all three parties and involved standpoints about the diagnosis as well as treatment options.
Conclusion: Using the pragma-dialectical argumentation theory as an analytical framework reveals that patient companions can substantially influence treatment decision-making during medical consultation. This influence is contingent upon the specific role they assume in the discussion, the type of disagreement with the health professional and patient, and the formation of coalitions with these parties.
Practice implications: The contributions by patient companions should be considered in SDM if the companion forms a coalition with the patient. If the companion does not form a coalition, the contributions might have a bearing on SDM as well, but their acceptability and relevance for the treatment decision should be checked by the health professional. In general, it is desirable to explicitly establish the role of patient companions in consultations.

1. Introduction

Adult patients frequently bring along a companion, such as a partner, friend or family member, to a consultation [2–4].[1] Patient federations indeed recommend that patients bring someone for practical or moral support, but the companion may, in fact, also influence the treatment decision-making process (see [5]). For instance, companions can ask questions, make suggestions, and bring in information about the patient's health to which the health professional does not have immediate access. Such input could be relevant for the treatment decision-making process [6,7], especially when participants strive for shared decision-making (SDM): the companion could add a perspective on the patient's situation that would otherwise remain unknown.

While protocols and literature on SDM describe the roles and tasks of

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[1] We shall also refer to these companions as 'informal companions', and focus on such companions in the remainder of this paper. Hence, we will leave out formal companions, such as paid health professionals and interpreters, as they may influence consultations in different ways (e.g., [8,9]).

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both health professional and patient in collaboratively deciding on treatment, there is very little focus on how input from third parties in the consultation can or should be taken into account. The possible influence of patient companions on medical decision-making is even more interesting in view of the argumentative dimension of SDM [10]. As SDM requires discussing treatment options and reaching a decision, it includes the presentation of arguments, and the weighing of pros and cons. The participation of a companion in this process introduces a third perspective, resulting in a (more complex) discussion situation which might be relevant for the treatment decision.

To gain more insight into the consequences of triadic deliberation for SDM, this study uses the pragma-dialectical argumentation theory developed by Van Eemeren and Grootendorst [11] to systematically examine which argumentative role(s) a third party can fulfil in the decision-making process. In this article, we will present a theoretical framework outlining twelve different discussion situations, covering all potential role divisions. Our aim is to investigate the type of involvement of patient companions in the argumentative exchanges in consultations and explore when their contributions should be considered in SDM. To this end, we apply our framework to qualitatively analyse ten face-to-face consultations in a Dutch regional hospital in which adult, competent patients are accompanied by an adult spouse, friend, parent or child.

2. Patient companions in medical consultations

2.1. The roles of patient companions

The prevalence of informal companions accompanying patients during medical consultations varies considerably, depending on the nature of the consultation, patient age, and physical health [12]. Companions are present in 16–25 % of primary care and outpatient clinics consultations, whereas older adults and oncology patients are accompanied in respectively 36–57 % and 64–86 % of cases [3,4].

The presence of a third party could impact the medical consultation in several ways. So-called polylogues, involving three (or more) interlocutors, differ from dyadic interactions in turn-taking complexity and interactional dynamics [13]. Polylogues facilitate scenarios where one party may respond on behalf of another and where parties can introduce otherwise unaddressed information. Additionally, coalitions may arise between the patient and companion, the patient and health professional, or the companion and health professional [14,15].

The role of companions can also influence the treatment decision-making process. Companions can adopt various roles, ranging from passive participants offering support without engaging in interaction to advocates mediating and providing information on behalf of the patient, to saboteurs or opportunists who undermine the patient or address their own medical issues [16,17]. These distinct roles are reflected in companions' contributions to the conversation (see [5]). Active companions can help patients by asking questions or providing information that the patient is unable to give [3,18]. Companions of vulnerable patients often assume great responsibility for care decisions [19]. Additionally, they may feel responsible for treatment success, such as administering medication [2,7].

Contrastingly, the participation of third parties in consultations could also have negative consequences. For example, Greene et al. [12] found that in triadic geriatric encounters, patients were less assertive. They also less frequently raised issues related to their personal habits and to the physician-patient relationship. Additionally, they observed less joint decision-making. Very dominant companions were even found to position themselves as the primary point of contact and minimise the patient's participation [7,20]. These dominant companions could also introduce topics that the patient does not want to address [21].

Despite these findings, the precise impact of patient companions on SDM remains unclear. Shields et al. [21] and Pel-Littel et al. [4], found no discernible distinction between dyadic and triadic consultations regarding patient-centredness or patient participation in the decision-making process. However, informal observations during actual medical consultations suggest that third parties may facilitate or enhance SDM [7].

2.2. Argumentation in triadic medical consultations

To determine how patient companions could influence SDM between patients and health professionals, it is necessary to take a closer look at what SDM involves. We will do so in this section and, additionally, introduce the role that argumentation plays in the SDM process.

SDM requires health professionals and patients to discuss treatment options by making use of the doctor's medical expertise and the patient's personal expertise and preferences. As outlined by Stiggelbout et al. [22], SDM entails the following four steps:

1. The professional informs the patient that a decision is to be made and that the patient's opinion is important;
2. The professional explains the options and the pros and cons of each relevant option;
3. The professional and patient discuss the patient's preferences; the professional supports the patient in deliberation;
4. The professional and patient discuss the patient's decisional role preference, make or defer the decision, and discuss possible follow-up.

In SDM, argumentation plays a pivotal role.[2] This is apparent in step three in Stiggelbout et al.'s model [22], which prescribes that the health professional and the patient *deliberate* about the treatment options. Hence, this step involves assessing all possible courses of actions and weighing the pros and cons of treatment options for the specific patient, using mainly pragmatic argumentation [23].

Since SDM is aimed at coming to an agreement among the parties by critically assessing the acceptability of the diagnosis or the proposal for treatment, several argumentation scholars have described this process as a type of argumentative discussion [23–30]. Medical consultation can hence be seen as an argumentative activity aimed at solving a (potential or anticipated) difference of opinion [31,32].

According to the pragma-dialectical theory of argumentation [11], a difference of opinion entails that one party expresses a particular point of view, a *standpoint* (e.g., "You should take medication") and another does not accept that standpoint at face value. The party expressing the standpoint adopts the role of *protagonist* and is expected to defend their position with arguments. The party doubting the standpoint adopts the role of *antagonist* and has no burden of proof. Despite this terminology, it should be noted that an argumentative discussion is seen as a collaborative activity in which the discussion parties together aim to resolve their difference of opinion.

In medical consultation, different types of differences of opinion can arise, in which participants adopt different roles and possibly form coalitions. If a party only expresses doubts about a particular course of action ("I'm not sure whether I want to take medication"), the situation can be seen as a 'non-mixed' disagreement. In that case, one party adopts a standpoint and attains the role of protagonist having a burden of proof for that standpoint, while the other party has the role of a doubting antagonist.

A more antagonistic situation occurs when a party advances an opposing standpoint. For example, the health professional could recommend a treatment ("You should use an inhaler") and the patient could object to it with an alternative proposal ("I prefer antibiotics"). Such a situation qualifies as a 'mixed' dispute between the health

[2] It should be noted that, following argumentation-theoretical approaches, we use 'argumentation' as a neutral term, denoting one or more reasons provided in support of a particular claim or 'standpoint'.

professional and patient, as both act as protagonist of their own standpoint and antagonist of the other party's standpoint [11].

Argumentative discussions become more complex when three parties participate. In such argumentative polylogues [33], the third party can also adopt a standpoint and express doubt, and combinations of differences of opinion can occur (e.g., a combination of mixed and non-mixed disagreements), requiring parties to address the standpoint and arguments of several antagonists. Additionally, these antagonists may form a coalition, supporting each other's standpoint. Therefore, the participation of a companion may result in a more complex argumentative medical consultation.

Despite the patient companions' potential argumentative role in the SDM process, they do not have a designated epistemic or deontic role in SDM. From an epistemic perspective, the healthcare professional is expected to act as medical expert and the patient as the expert from experience [34]. From a deontic perspective, the professional will have to present possible treatment options, while the patient has the right to make the final decision about the treatment. The companion, on the other hand, has no obligations or rights regarding the deliberation of treatment options. Yet, when a companion is present, they can typically not be ignored; depending on the specific discussion situation, they might even be the primary participant in the decision-making process.

2.3. Discussion situations in triadic medical consultations

To analyse how patient companions could participate in treatment discussions, we will present a systematic overview of possible discussion situations in triadic medical consultations in this section. With the term 'discussion situation' we mean the combination of the type of disagreement between the parties (non-mixed, mixed or a combination of both), the discussion role that the parties take upon themselves (protagonist or antagonist), and any coalition formation (no coalition or possible coalition). Based on these theoretical distinctions, twelve different discussion situations can be delineated for disagreements between patients, health professionals and companions, as presented in Table 1 (see also Pilgram and Van Poppel [1]).

In discussion situations 1, 2 and 3, the most straight-forward situations, there is only a non-mixed disagreement in which no coalition is formed. This, for instance, occurs when the health professional proposes a treatment and the patient and companion simply ask why the professional proposes it (discussion situation 1). Coalitions cannot be formed in these discussion situations, because the antagonists do not adopt any standpoints; their position is a neutral one, they merely express doubt. Consequently, these doubting antagonists cannot build on each other's argumentation, which we consider a requirement for coalition formation.

It should be noted that discussion situations 1 and 2 differ relatively little from dyadic medical discussions between the patient and the health professional, since only the health professional and patient adopt a position here. Still, also in these situations, a companion who explicitly expresses doubt may invite the health professional to provide argumentation for a standpoint.

Discussion situation 3 diverges markedly from two-party consultations, as it involves a third party adopting a standpoint, while the patient and health professional scrutinise this standpoint. This situation does not align with any of the roles attributed to third parties in the extant literature (see Section 2.1). Nevertheless, it presents a realistic scenario, for example, in cases where a third party proposes a treatment plan, and both the patient and health professional have doubts about it.

Discussion situations 4–12 demonstrate more clearly that the involvement of a companion facilitates a polylogical discussion. These scenarios show greater complexity than the first three, due to possible coalition formation between the parties and the emergence of different types of disagreements between the participants. Discussion situations 4–9 represent situations in which coalitions are theoretically possible. For example, a companion might take on the role of patient advocate and form a coalition with the patient against the health professional's proposal (discussion situation 7a), or the companion and patient may propose an alternative treatment together (7b). In situations 7–9, mixed differences of opinion occur in which parties have opposing standpoints. For simplicity's sake, we only refer to the discussion parties in these situations as either a 'protagonist' or an 'antagonist: opposition', but it should be noted that the protagonist of a standpoint in a mixed disagreement simultaneously adopts the role of antagonist of the opposing standpoint and vice versa. Discussion situations 10–12 represent combinations of possible disagreements among the three participants. In these cases, two parties engage in a mixed disagreement, while the other party has doubts about both their positions and enters a non-mixed disagreement with each of them.

Table 1
Possible discussion situations for three-party disputes in medical consultation.

Type of disagreement	Coalition	Nr.	Protagonist	Antagonist: doubt	Antagonist: opposition
Non-mixed	No	1	Health professional	Patient and companion	-
		2	Patient	Health professional and companion	-
		3	companion	Health professional and patient	-
	Possible	4	Health professional and patient	companion	-
		5	Health professional and companion	Patient	-
		6	Patient and companion	Health professional	-
Mixed	Possible	7a	Health professional	-	Patient and companion
		7b	Patient and companion	-	Health professional
		8a	companion	-	Health professional and patient
		8b	Health professional and patient	-	companion
		9a	Patient	-	Health professional and companion
		9b	Health professional and companion	-	Patient
Partly mixed, partly non-mixed	No	10a	Health professional	companion	Patient
		10b	Patient	companion	Health professional
		11a	Health professional	Patient	companion
		11b	companion	Patient	Health professional
		12a	companion	Health professional	Patient
		12b	Patient	Health professional	companion

3. Methodology

3.1. Data

For the analysis of discussion situations in actual practice, we used ten videotaped medical consultations between health professionals and

patients who were accompanied by one informal companion. The consultations took place in the Dutch regional Isala hospital located in Zwolle. These ten consultations were randomly selected, based on the presence of an informal companion, from a larger corpus comprising 727 consultations involving 41 health professionals from various medical and surgical disciplines. This corpus was assembled by Driever [35] between November 2018 and April 2019.[3] The corpus only includes interactions in which one or more decisions were made. The camera was directed at the health professional; for privacy reasons, the patients and companions were only audio-recorded.

A total of eight distinct health professionals participated (1 female, 7 male) in the ten consultations, representing various specialties, including urology, oncology, and anaesthesiology. The patient cohort (6 female, 4 male) were all adults. While exact ages are unavailable, half of the patients were below the age of 65 and half were 65 years or older. The companions accompanying the patients varied from partners (5 times), adult daughters (2 times), a mother (1 time) to unspecified companions (2 times). The duration of the consultations ranged from 4 min 40 s to 41 min 35 s, with an average duration of 17 min and 13 s.

3.2. Method of Analysis

The verbal interactions during the medical consultations were transcribed using conversation analytical conventions [36] and anonymised by a student assistant in collaboration with the first author. Based on the 12 different discussion situations in three-party deliberation in medical consultations presented in Table 1, we determined the positions of the health professional, patient and companion (protagonist, doubting antagonist or opposing antagonist), the type of disagreement (non-mixed, mixed, or partly mixed, partly non-mixed) and the possibility of coalition-formation (yes or no) for the ten consultations. Whenever the health professional, patient or companion would make a claim that was met with explicit doubt or criticism, we coded it as a disagreement. As we adopted a very broad perspective on disagreement, we also included cases where disagreement is anticipated, for instance, when one party advances arguments without any explicit expression of doubt or criticism by any of the other parties. Moreover, we identified (potential) disagreements on all levels of argumentation, including situations where parties potentially disagreed over a subargument (e.g., concerning a diagnosis, rather than the treatment decision). This meant that consultations could comprise multiple distinct discussion situations.

4. Results

4.1. Overview of discussion situations

In our dataset, an average of 4.3 distinct discussion situations occurred per consultation, with a range of one discussion situation per consultation to maximally 11. These discussion situations concerned the treatment decision itself (e.g., should the patient undergo surgery or radiation?), the preferences of the patient (e.g., what side-effect is less undesirable for the patient?) but also preliminary questions about the patient's health or diagnosis (e.g., does the patient suffer from incontinence?). There was a noticeable difference between the number of discussion situations per consultation in patients aged under 65 and aged 65 or over: an average of 2.6 versus 6.0 discussion situations per consultation, respectively.

Table 2 shows the exact distributions of discussion situations in our corpus. With respect to the type of discussion situations we encountered, 65.12 % concerned non-mixed, 6.98 % mixed, and 27.91 % partly mixed, partly non-mixed disagreements. Discussion situation 1, consisting of a non-mixed disagreement between the health profession acting as the protagonist and the patient together with the companion acting as the doubting antagonists, was most frequently found, accounting for 37.21 % of all discussion situations. In contrast, discussion situations 4, 7a, 8a-b, 9a-b, 10a and 12a were not present in our corpus.

Table 2
Frequency of occurrence of the twelve discussion situations in our dataset.

Discussion situation	Frequency of occurrence
1	16 (37.21 %)
2	4 (9.30 %)
3	3 (6.98 %)
4	0
5	2 (4.65 %)
6	3 (6.98 %)
7a	0
7b	3 (6.98 %)
8a	0
8b	0
9a	0
9b	0
10a	0
10b	4 (9.30 %)
11a	2 (4.65 %)
11b	4 (9.30 %)
12a	0
12b	2 (4.65 %)
TOTAL	**43**

In the following sections, we will examine the encountered discussion situations in more detail by means of three consultation excerpts (the excerpts are translated from Dutch; see the Appendix for the original interactions). Due to limited space, we have selected a case from each type of disagreement: non-mixed, mixed, and partly non-mixed, partly mixed. In this selection, we made sure that participants fulfilled different discussion roles and that they varied in whether coalitions were formed. Thus, each example illustrates different possible ways in which patient companions could influence the decision-making process.

4.2. Basic discussion situation: Non-mixed disagreements

As shown in the previous section, discussion situation 1 was most frequently encountered: a non-mixed difference of opinion between the health professional as protagonist, and the patient and companion as doubting antagonists (see Table 1). This outcome is not surprising, because, institutionally, the health professional is charged with proposing treatment options, and providing pros and cons for it (in line with step 2 of Stiggelbout et al.'s [22] model of SDM). From an argumentation-theoretical perspective, this means that the health professional has to act as a protagonist in the consultation. If the patient and companion have not yet made up their minds on the treatment decision, then this automatically results in this type of situation. In this sense, discussion situation 1 can be regarded as a basic discussion situation.

An example of this basic discussion situation is presented as *excerpt 1*, taken from a medical consultation between a doctor, a senior female patient suffering from macular degeneration, and the patient's adult daughter. The excerpt occurs about halfway into the consultation.

Excerpt 1 Medical consultation between a doctor (D) and the daughter (companion, C) of a female patient (P) (>65 yrs.) suffering from visual impairment (Isala hospital corpus, our translation, see Appendix for the original interaction in Dutch)

59	D	And it is also very good that I will soon look into your eye,
60		because I have the feeling that on the scans it is not completely calm
61		in your eyes
62		and then we're not just talking about dry macular degeneration,
63		but perhaps also about a wet form.

(*continued on next page*)

[3] The study was approved by the Ethical Review Board of Isala Hospital, Zwolle (file number 200308); all participants completed a written informed consent form.

(*continued*)

64	P	Oh.
65	D	[and]-
66	C	[But] they couldn't see that last time?
67		Or what is the difference in those eight weeks?
68		if I may ask?
69	D	Well,
70		not so much difference,
71		um you just see some deviations
72		and they were also visible last time,
73	C	Yes.
74	D	but it is a bit further from the centre.
75	C	Yes.
76	D	So I will also see what I think about it
77		but otherwise we have to either treat it or observe it,
78		only the problem is of course,
79		if such a process continues, you will have to give up something again.
80	C	Yeah.

At the beginning of *excerpt 1*, the doctor argues why it is good to examine the patient's eye now (in lines 59–62): the scans show that the eye is not completely calm and the patient might have wet macular degeneration, a severe form of degeneration, which may cause loss of vision. Although the patient's daughter does not oppose the idea of the doctor examining her mother's eye, she does ask why this is necessary now, while that was not the case during a previous consultation (in lines 65–66). The doctor recognises that the daughter asks valid questions (in lines 68–71) and points out that the degeneration has increased: "it is a bit further from the centre" (in line 73). He additionally emphasises the need to examine the eye to determine what treatment is necessary (in lines 76–77) and concludes that only observing the eye might pose a risk, because if the degeneration worsens, the patient "will have to give up something again" (in line 78).[4]

Given that the doctor advances argumentation in response to the daughter's questions, he can be regarded as the protagonist and the daughter as a doubting antagonist. The patient herself does not speak in this excerpt, but the doctor also addresses her as a doubting antagonist, as he directs his argumentation not just at the daughter, but also at the patient, who, after all, has to make the final decision about the treatment – moreover, the doctor even directly addresses the patient with "you" in line 78.

Although the discussion situation in *excerpt 1* is a basic one, it does not mean that the patient's companion fulfils a passive or irrelevant role in the decision-making process. In fact, the daughter can be regarded as an 'advocate' [17], a spokesperson for her mother. What is more, her question evokes a response from the doctor that provides valuable input for the decision-making process: the doctor justifies the need for examining the eye, and mentions the treatment options and their risks. Thus, the daughter's questions could enhance SDM. Still, it remains unknown whether the patient's concerns and preferences are adequately addressed, as the doctor's communication is primarily directed at the companion, not the patient.

4.3. Complex discussion situation: Mixed disagreements

More complex discussion situations were also found in the data. One way in which a discussion can become complex is when parties adopt opposing standpoints and thereby each incur a burden of proof for their standpoint. From an argumentation-theoretical perspective, the parties then have a mixed difference of opinion (this is the case in discussion situations 7a-12b in Table 1, accounting for 34.88 % of the discussion situations in our data (see Table 2)). Another way is by parties advancing argumentation together, thereby acting as a coalition (this could be the case in discussion situations 4–9b in Table 1, accounting for 18.60 % of the discussion situations in our data (see Table 2)). *Excerpt 2* illustrates that these two causes of discussion complexity can also occur together.

In *excerpt 2*, a female patient (<65 years) who has just been diagnosed with irritable bowel disease discusses possible treatment options with her doctor. The patient is accompanied by her partner, who actively participates throughout the consultation.

Excerpt 2 Female patient (P) (<65 yrs.) suffering from irritable bowel disease, doctor (D) and the patient's partner (companion, C) (Isala hospital corpus, our translation, see Appendix for the original interaction in Dutch)

364	P	What I- what I still find interesting to mention is
365		that I did indeed watch the TV programme a few weeks ago
366		[about] the microbiome,
367	C	[Yes].
368	D	Yes.
369	P	uhm and I was like gosh,
370		is that something to examine whether, well, yeah, uhm look more at the diet […]
371		indeed or rather the combination of certain
372		nutrients right
		[…]
379	D	We have known for a number of years now that the microbiome exists
		[…]
389	D	but we don't know yet which strains promote health
390		and which don't, so to speak
		[…]
442	D	uhm but what we should really do with it,
443		we just don't know
444	C	No but okay,
445		it already indicates that there is a need
446		and yes you have to investigate things to get better

At the beginning of *excerpt 2*, the patient introduces a new topic: the 'microbiome', a term used for the collective of microorganisms in a person's intestines. The patient tells her doctor that she and her partner have recently watched a television programme on the microbiome (lines 364–366). From the patient's subsequent contributions, it becomes clear why she provides the doctor with this information: she thinks that examination of her microbiome might be worthwhile (lines 369–370), making her a protagonist in this excerpt.

The subsequent reactions by the doctor show that he does not really believe that this is useful: he argues that it is unclear what to do with results of microbiome analyses, since it is unknown which microbial strains are essential for promoting health (lines 389–390 and 442–443). The doctor can hence be regarded as the antagonist in a mixed dispute with the patient. For this reason, the discussion situation is already more complex than the one in *excerpt 1* (about macular degeneration); here, both the patient and the doctor have a burden of proof.

Interestingly, the discussion in *excerpt 2* is also more complex in another way. From the last three lines of *excerpt 2*, it appears that the patient's companion, her partner, actively takes part in the discussion. Despite the difficulties with microbiome analyses, the partner argues that it might nonetheless be worthwhile to examine the patient's microbiome, since microbiomes should be further investigated exactly because little is known about the strains that are essential for health promotion, and further examination might elucidate that (lines 444–446). Thus, he supports the patient's opinion and provides additional argumentation for it. This indicates that the patient and her partner function as a coalition – something which is strengthened by the fact that, directly following the partner's argumentation, the patient does not call into question his argumentation.

So, *excerpt 2* can be regarded as an illustration of complex discussion situation 7b, in which the patient and companion act as a coalition, fulfilling the role of the protagonist, and the doctor as the opposing antagonist in a mixed difference of opinion. With respect to SDM, especially the coalition building between the patient and her companion

[4] The doctor, in fact, moves away from arguing for the need to examine the eye to the next step of deciding on the proper treatment once the condition of the eye has indeed worsened. This can be seen as a tactic to convince the companion (cf. [37]).

means that the doctor needs to take into account the companion's argumentation in the treatment discussion. Consequently, the doctor is forced to discuss a treatment option that the doctor does not endorse himself. Additionally, since the companion and patient present themselves as a coalition by using the pronoun 'we', it becomes harder for the doctor to disentangle the patient's needs and preferences. The doctor, in the end, agrees with further examination of the patient's diet, leaving the possibility of a microbiome analysis open, by referring the patient to the *hospital*'s dietician.

4.4. Complex discussion situations: Partly mixed, partly non-mixed

Lastly, special attention is needed for the partly mixed, partly non-mixed discussion situations (10a-12b in Table 1). Not because of their frequency (only 27.91 % in our dataset, see Table 2), but because they are unique for polylogical interactions: unlike the previously described discussion situations, they do not mimic a dialogical discussion between two parties.

An example of such a discussion situation can be found in *excerpt 3*, taken from an actual consultation between a senior patient who suffers from frequent urinary tract infections, her adult daughter and the doctor.

Excerpt 3 Medical consultation between a doctor (D), a female patient (P) (>65 yrs.) with urinary tract infections and companion (C), the patient's daughter (Isala hospital corpus, our translation, see Appendix for the original interaction in Dutch)

34	D	And how often is that [that you suffer from bladder infections].
35	P	Yeah, I don't think that often at all.
36	C	I do.
37	P	Yes?
38	D	Tell me,
39		how often is that.
40	P	You say it then.
41	C	Well I uh actually always hear you say,
42		or you are uh something starts again

Excerpt 3 occurs relatively early on in the consultation. This is not surprising, as the doctor wants to determine how severe the patient's health problem is. He therefore starts by asking how often the patient suffers from urinary tract infections (in line 34). The patient replies that she does not believe them to occur often (in line 35), but the daughter directly and openly contradicts her ("I do [think it is often]" in 36). By means of this utterance, it becomes clear that the daughter has a mixed disagreement with her mother in which both express a different opinion about the patient's medical condition.

At the same time, the doctor does not express any opinion, or standpoint, on the matter. This is illustrated by how the consultation proceeds: the doctor asks the mother and daughter how often the mother suffers from urinary tract infections (in lines 38–40), making him a doubting antagonist in a non-mixed difference of opinion with the mother and her daughter. In other words, there is a partly mixed, partly non-mixed difference of opinion of the kind represented as discussion situation 12b in Table 1.

What is interesting about such situations in triadic consultations is that each party has a distinct argumentative role: the protagonist and opposing antagonist (respectively the patient and her daughter in *excerpt 3*) each have a burden of proof to fulfil, while the doctor does not. Yet, the doctor does have an institutional duty to request the patient and daughter to provide arguments for their diverting judgments, since the issue under discussion, the frequency with which the patient contracts urinary tract infections, is essential for a possible treatment decision. Indeed, the daughter provides such reasons at the end of the excerpt: she always hears her mother mentioning having an infection (in lines 42–43).

Although not included in the excerpt, the patient, after further argumentation from her daughter, agrees that the frequency of her urinary tract infections might be problematic. Since mother and daughter talk about the frequency in abstract terms ('not that often', 'always'), the doctor requests concrete information by asking how many antibiotics treatments the patient received in the previous year. This newly established common ground then leads the doctor to discuss possible treatments. Hence, the patient companion's input in this excerpt is fundamental for the diagnosis and further decision-making process.

5. Discussion and practical implications

In this contribution, we have explored the argumentative role and potential impact of patient companions on SDM within medical consultations. From an argumentation-theoretical perspective, we argue that this impact depends on the nature of the disagreement (mixed or non-mixed), the roles of parties as protagonists or antagonists, and the formation of coalitions among participants. For example, when acting in a coalition together with the patient, the companion might enhance SDM by simply adding argumentation to that of the patient, or even suggesting treatment options (such as in excerpt 2). If the companion does not build such a coalition or has a mixed disagreement with the patient, the acceptability and relevance of the companion's contributions have to be checked by the health professional (such as in excerpt 3).

Our analysis also reveals that discussions between patients, patient companions and health professionals may occur on various levels of the treatment decision-making process; not only on the main level of what treatment to choose, but also on a more preliminary level (e.g., the seriousness of the patient's condition). On each of these levels, patient companions can play a substantial role (e.g., by adding their perspective, posing critical questions, or requesting the health professional for further support). As a consequence, patient companions should be seen as potential partners in SDM throughout all steps of the decision-making process. For medical practice, this means that health professionals not only have to take the companion's contributions to the medical consultation seriously, but also that they have to determine the extent to which these contributions are representative of the patient's preferences (e.g., by checking whether the companion and patient formed a coalition) and the extent to which these contributions provide acceptable and relevant information for the decision-making process (e.g., by asking the companion and patient further questions).

This perspective on triadic consultations could have implications for SDM models: especially when taking the social context of healthcare into account, the potential role of companions should be incorporated in the division of roles and tasks in the decision-making process. Indeed, campaigns informing patients about healthcare and how to prepare for their doctor's appointment could address the possible roles of companions in treatment decision-making, going beyond that of a simple memory aid or moral support provider.

CRediT authorship contribution statement

Lotte van Poppel: Conceptualization, Formal analysis, Methodology, Project administration, Resources, Validation, Writing – original draft, Writing – review & editing. **Roosmaryn Pilgram:** Conceptualization, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix Excerpts 1–3: Original Interactions (in Dutch)

Excerpt 1 Medical consultation between a doctor (D) and the daughter (companion, C) of a female patient (P) (>65 yrs) suffering from visual impairment (Isala hospital corpus)

turn	speaker	
59	D	En het is ook heel goed dat ik straks in uw ogen ga kijken,
60		want ik heb wel het idee dat het op de scans niet helemaal rustig is
61		in uw ogen.
62		en dan praten we niet alleen over de droge maculadegeneratie,
63		maar misschien ook over een natte vorm.
64	P	Oh.
65	D	[en]-
66	C	[Maar] dat hebben ze dan de vorige keer niet kunnen zien?
67		of wat is het verschil in die acht weken tijd?
68		als ik vragen mag?
69	D	Nou,
70		niet zo zeer verschil,
71		ehm je ziet gewoon wat afwijkinktjes
72		en die zijn ook vorige keer gezien,
73	C	Ja.
74	D	maar het zit nog wat verder van het centrum.
75	C	Ja.
76	D	Dus ik ga ook kijken wat ik ervan vind,
77		maar anders moeten we het of gaan behandelen of gaan observeren,
78		alleen het probleem is natuurlijk,
79		als zo'n proces doorgaat dan kan je weer wat inleveren.
80	C	Ja.

Excerpt 2 Female patient (P) (<65 yrs) suffering from irritable bowel disease, doctor (D) and the patient's partner (companion, C) (Isala hospital corpus)

turn	speaker	
364	P	Wat ik- wat ik toch nog wel even interessant vind om te noemen is
365		dat ik inderdaad een paar weken geleden de tv-uitzending heb
366		[gezien] over het microbioom,
367	C	[Ja].
368	D	Ja.
369	P	ehm en ik zoiets had van goh,
370		is dat nog iets om te te onderzoeken of eh ja meer naar de voeding
371		inderdaad te kijken of meer de combinatie van bepaalde
372		voedingsstoffen hè,
		[…]
379	D	We weten nu een aantal jaar dat de microbioom bestaat,
		[…]
389	A	maar we weten nog niet welke stammen er voor gezondheid zijn
390		en welke stammen er eh tegen gezondheid zijn om het zo maar te zeggen,
		[…]
442		ehm maar wat we er echt mee moeten,
443		dat weten we gewoon niet.
444	C	Nee maar goed,
445		het geeft al aan dat er behoefte is
446		en ja je moet dingen onderzoeken om beter te worden

Excerpt 3 Medical consultation between a doctor (D), a female patient (P) (>65 yrs) with urinary tract infections and companion (C), the patient's daughter (Isala hospital corpus)

turn	speaker	
34	D	En hoe vaak is dat [dat u last heeft van blassontstekingen].
35	P	Ja ik vind zelf helemaal niet zo vaak.
36	C	Ik wel.
37	P	Ja?

(*continued on next page*)

(*continued*)

turn	speaker	
38	D	Vertel,
39		hoe vaak is dat.
40	P	Zeg jij het dan maar.
41	C	Nou ik hoor eh jou eigenlijk gewoon altijd,
42		of je bent eh er begint weer iets

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