9 Transfigurations of Lived Iatrogenic Risks in Switzerland

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Introduction

Polypharmacized[1] elderly individuals find themselves navigating uncharted territory. They must regularly consume multiple medications due to their chronic conditions while simultaneously remaining acutely aware of the potential adverse effects of such use on their body[2] and the lack of comprehensive evidence regarding the interactions between these numerous medications. This constant uncertainty surrounding their polypharmacy evolves over time, prompting them to develop strategies to manage these uncertainties. This raises the question: what transfigurative processes occur among polypharmacized individuals regarding their experiences of uncertainty related to iatrogenic risks?

The biomedical literature extensively documents the potential adverse effects that individuals living with polypharmacy may encounter. However, most of the existing literature approaches this issue from a medical, pharmaceutical, or public health perspective. In a recent work, Fainzang et al. (2019) dedicated a special issue to medication risks, addressing the topic from a socio-anthropological standpoint. However, to the best of our knowledge, there is limited literature that delves into the experiences and practices related to iatrogenic risks among polypharmacized individuals from a socio-anthropological perspective.

1 Polypharmacized individuals, also known as polymedicated individuals or individuals living with polypharmacy. In the context of this study, it characterizes individuals who have been consuming more than four medications per day for over three months.

2 According to Noaves et al. (2017: 878), "An estimated 5–78% of the elderly are subject to polypharmacy, 13–58% to drug–drug interactions." Long-term polypharmaceutical use is described in the medical literature as potentially inducing adverse effects. "In medicine, an adverse effect (AE) is a harmful and undesired effect resulting from a medication or intervention and procedures" (Rossini 2010: 89). According to Lalic et al. (2016), inappropriate medication prescription, distribution or use leads to higher hospitalization prevalence.

This paper is part of a broader socio-anthropological research project[3] focusing on elderly polypharmacized individuals' medication use and their interactions with their pharmacists in Western Switzerland. Using a critical interpretative approach, our investigation delves into the interpretations and meanings that individuals attribute to their illnesses, experiences, and health practices while considering the macro-social dynamics that influence these representations and practices.

In this text we argue that experiences of uncertainties associated with iatrogenic risks among polypharmacized individuals lead to the transfiguration of their medication use strategies. Specifically, individuals themselves are the principal actors in the transfiguration of their experiences, and pharmacists contribute to shaping and transforming these experiences. We also explore the transfigurative impact of their perception of time on their experiences of iatrogenic risks and, conversely, how polypharmacy-induced uncertainties affect individuals' relationships with time. To understand how these uncertainties are managed by both individuals living with polypharmacy and pharmacists, we approach the examination of medical uncertainties through the lens of two distinct analytical frameworks: the concepts of *transfiguration* and the temporal modalities of *kairos, chronos, and aevum*.

Transfiguration

We draw upon Kehr et al.'s (2019) and Mattes et al.'s definition (2020) of *transfiguration*, which denotes the "continual, processual engagement and disengagement of humans with each other and their material and non-material worlds within and across particular figurations (i.e., relations of power and webs of social interdependences), each of which is imbued with its own specific logic that helps to hold the web together" (Mattes et al. 2020: 69). Kehr et al. recently used the concept of the *transfiguration* of health and the moral economies of medicine, describing "how pervasive and commanding many aspects of economics and finance – and the values and logics that the highly advanced capitalist world order is inflicting on all domains of human existence and wellbeing – have become over the last decades, not least with regard to the omnipresent politics and practice of neoliberal governance" (2019: 2). As such, medical products and health policies are *transfigured*, as they are "imbued with economic, ecological, scientific, political, cultural and moral values and norms that vary across place and time and are embedded in both local and global relations of (inter-)dependency and power."

3 Study financed by the Swiss National Scientific Foundation (SNSF), project n° 10001A 176336 by Foley, R.-A. entitled "Les personnes âgées face à leur polymédication: approche socio-anthropologique des usages des médicaments et relation au dispensateur" conducted between 2017 and 2022.

This conceptual lens is particularly compelling because it departs from conventional approaches that solely emphasize macro-social dimensions that shape meso- and micro-social dynamics. Instead, it offers a dynamic perspective through which to examine the reciprocal influence of structural figurations, health professionals, and health insurance policies, all of which are also transfigured as they interact with individuals' practices.

If Kehr et al. describe the economization of health as the primary transfigurative force affecting bodies and relationships, we contend that in the context of experiences related to iatrogenic risks, individuals themselves emerge as the primary transfigurative agents of uncertainties associated with medication consumption. We then show the roles of pharmacists in shaping and transforming these experiences. To comprehend uncertainty, we use the second analytical framework to delineate various perceptions of time and to understand how they influence the transfiguration of uncertainty. In this text, we refer to three temporal modalities.

Kairos, chronos, and aevum

Trapani and Maldonado (2018: 279) emphasized the "new importance" given to *kairos* in the context of temporal modalities. Additionally, scholars such as Derbez et al., who refer to the work of Adam et al. (2004), have emphasized that "the notion of kairos has long been mobilized by sociologists of time, notably as being distinct from chronos" (2018: 14). Kairos denotes "the moments in which time is experienced as charged with significance," according to Svendsen et al. (2018: 23). *Chronos*, "in ancient Greek, refers to 'the mere passing of time'" (Svendsen et al. 2018: 23). It represents "linear, chronological, clock-time" (Wheater 2022: 12). Niles et al. highlight the interplay and sometimes the contradiction between these temporal modalities in their account of midwives' experiences, entitled "Kairos care in a Chronos System" (2021: 484). They discuss the challenges faced when striving to provide individualized care within a health system driven by imperatives oriented around efficiency and promptness. Another term used in the literature to describe different temporal modalities is *aevum*. As defined by Kermode et al. (2000: 461–72), "'aevum' in medieval Latin signifies a mode of existence situated between worldly time and eternity."

It is essential to distinguish between the perceptions of time held by individuals and pharmacists, as the perception of uncertainty is closely intertwined with one's personal view of time. Time exerts a transfigurative influence on experiences of iatrogenic risks, and the uncertainties resulting from polypharmacy significantly impact individuals' relationships with time. Using these analytical lenses, our inquiry revolves around several questions: What types of uncertainties do individuals encounter when faced with polypharmacy-associated iatrogenic risks? What strategies do they devise to navigate and cope with these uncertainties? Furthermore,

what strategies do pharmacists adopt when addressing the uncertainties arising from polypharmacy? How do temporal modalities transfigure polypharmacized individuals' experiences and practices related to iatrogenic risks? Conversely, how do these uncertainties alter their perceptions of time?

We begin by uncovering the narratives surrounding iatrogenic polypharmaceutical risks in lay discourse. We then explore the strategies employed by our participants to navigate the uncertainties associated with iatrogenic risks. Next, we decipher how individuals experience various temporal modalities of iatrogenic risks and how living with polypharmacy transfigures an individual's relationship with time. Secondly, we examine how pharmacists develop strategies to navigate the uncertainties inherent in polypharmaceutical practices. These multifaceted dynamics also lead to variations in perceptions of temporalities among these health professionals, reflecting their unique economic temporalities. We finally discuss how the practices of both individuals and pharmacists contribute to the transformation of lived iatrogenic risks, and how this transfiguration extends to a global scale.

Methods

The data for this study were collected as part of a socio-anthropological research project that focused on understanding the logics and practices of elderly polypharmacized individuals regarding their medication in Switzerland. We conducted 45 semi-structured home interviews with polypharmacized individuals aged 65 years and older. Additionally, we conducted focused observations of their household pharmacy supplies. The interviews lasted from fifty-five minutes to two hours. We also observed pharmacist-patient interactions during "polypharmacy interviews" or "polymedication checks" (PMC).[4] Furthermore, we conducted nine follow-up filmed interviews, which were specifically carried out for the purpose of creating a research film (Demolis et al. 2020).[5]

In addition to the interviews with individuals, we conducted interviews with four pharmacists who partnered with us in this research. Following the data collection, we fully transcribed all interviews and applied coding and crosschecking using MAXQDA software. Subsequently, we analyzed the subthemes using a content analysis method. The filmed interviews were integrated into the overall analysis and subjected to the same coding and sub-coding process.

4 "Since 2010, Swiss community pharmacies can offer a 'polymedication check' (PMC) to patients on ≥4 prescribed drugs taken over ≥3 months. The check is focused on adherence problems, drug-related problems, and the need for supply of prescribed drugs in a weekly pill organizer" (Messerli et al. 2016: 1071)

5 The film can be accessed at the following link: https://polymedication.hesav.ch/acces-film/

For this paper, we adopted a case study approach, wherein we thoroughly analyzed and synthesized all data relevant to our research question, yielding key results. We selected the most representative quotes from the narratives of the 45 participants whose data we analyzed; quotes from six protagonists were selected. Throughout the text, we provide information about the characteristics and contexts of these selected participants.

Findings

Individuals' various levels of uncertainties pertaining to their polypharmaceutical practices

Our participants shared their experiences and representations concerning iatrogenic risks associated with specific medications. They recounted risks such as dependency, undesirable side effects (e.g., dizziness, weight gain, drops in blood pressure, myalgia), and allergic reactions. Additionally, they expressed uncertainty related to iatrogenic risks when using several medications simultaneously, including concerns about overconsumption, drug interactions, and the consequences of long-term daily exposure to pharmaceutical chemicals. However, for some participants, mandatory polypharmacy was non-negotiable due to their medical conditions, resulting in heightened levels of uncertainty. We will describe these various types of uncertainties.

First, when faced with the combination of several medications, which some participants referred to as their "medication cocktail," they grappled with uncertainties regarding its potential outcomes.

> Monsieur Boichat is an 80-year-old retired cook who lives in the countryside with his wife. He trained as a cook and travelled internationally during the first part of his career before settling down as a hospital cook. His father was a farmer. He has two sons, one of whom works as a state worker and the other as a lorry driver. He has kidney failure and has a knee prosthesis and currently lives with diabetes and high cholesterol.[6] He takes seven medications per day on a chronic basis.

Monsieur Boichat stated the following:

> The cocktail […] may well lead to something not good […] Nobody knows what happens with several medicines […]. The medication cocktail […] when you make

6 Participants' pathologies are indicated the first time they are referred to.

> cocktails with liquors and things like that, it can bring about things that are not good. (Monsieur Boichat, July 13, 2018[7])

Some participants expressed uncertainty regarding which specific medicine among the cocktail may be responsible for potential harm.

> Monsieur Courvoisier is an 85-year-old retired train conductor. He received professional training in mechanics and electronics. His father was a mechanic who became a market gardener in his later life. He has two children, one of whom works as a pharmacy laboratory technician. He lives with his wife in one the main towns of western Switzerland. He has a mechanical aortic valve and suffers from lower gastrointestinal bleeding, obstructive voiding dysfunction, and hypertension. He takes five medications per day and takes three more occasionally.
> Because I took medication for a long time…I think the one harmful to the kidneys is… Aldalat, I don't remember which one. (Monsieur Courvoisier, October 8, 2018)

Additionally, the form of harm that may be caused is uncertain, as illustrated by Monsieur Courvoisier: "If we took it for a long time, it may have an effect on the kidneys, or I don't know what."

Another cause for uncertainty was the perception that high medication use may at some point become harmful; however, they were uncertain when or if this situation would arise.

> Madame Rosselat is a 66-year-old retired trade union secretary. She also used to work as a social educator. She trained in sales and then completed her education to become a social educator. Her illnesses drove her to be medically discharged five years before her retirement. She lives by herself in one the main cities of western Switzerland. She is from the Swiss Jura. She is divorced and has one daughter, who is a psychologist. She lives with rheumatoid arthritis, clogged coronary arteries, asthma, hypertension, cholesterol, and osteoarthritis, and she currently takes 10 medications per day.
> You have to get check-ups on your liver; you have to get check-ups on your kidney: I wouldn't be surprised if one day I had either a kidney or a liver problem. (Madame Rosselat, July 27, 2018)

This uncertainty stems from the awareness among most respondents that despite significant scientific and technological advancements, the intrinsic unpredictability related to their polypharmaceutical consumption remains. This uncertainty persists because not all medication combinations have been scientifically documented for

7 The day on which the interview was conducted is indicated at the first mention of each participant.

elderly patients. However, they cannot discontinue their medication, leaving them with no viable solution. Madame Rosselat expressed the following: "I would like to stop but I can't!"

Relying on and constructing medical common-sense discourses

Faced with these uncertainties, study participants created a series of common-sense medical discourses for themselves; they often referred to them as belonging to the realm of common knowledge:

> Madame Bovet is a 67-year-old retired psychologist. She has four children and began her studies after raising her children. She lives with her husband, an engineer, in one of the main towns in Switzerland. She currently lives with refractory chronic low back pain, hypotension, *age-related macular degeneration* (ARMD), and urinary and fecal incontinence, and she takes nine medications per day and takes another 10 medications occasionally.

She stated the following: "Everybody knows these side effects." (Madame Bovet, September 20, 2019)

The primary cornerstone of this medical common-sense knowledge is the recognition of hazards associated with high medication consumption.

> Monsieur Griset, a 90-year-old former army instructor, is a widower living in the periphery of a major town with his grandson, who attends a university nearby. He has three children. Since retiring, he has become very involved in charity work, providing school and medical supplies to low-income countries. He lives with postural back pain and sciatica, lumbar spinal stenosis, acute hearing loss in one ear, and insomnia, and he currently takes nine medications on a regular basis and four medications occasionally.

He stated the following: "We well know we shouldn't consume too much, that if we consume too much, there is the negative side." (Monsieur Griset, May 17, 2019)

Secondly, the consequences of iatrogenic polypharmacy are frequently described in relation to specific bodily functions. Most participants highlight the impact of polypharmacy on organs such as the kidney, stomach, and liver, as exemplified by Monsieur Courvoisier, who stated the following: "Maybe not all of them but some of this medication surely harms the stomach." (Monsieur Courvoisier, October 8, 2018)

Thirdly, the vocabulary commonly used to describe polypharmacy frequently includes terms like saturation, exaggeration, and accumulation of medicines within the body. Monsieur Griset expressed the following: "There is such a huge panoply of medication!"

Massé (1995) invoked the concept of idiosyncratic knowledge, referring to an individual's beliefs derived from their own observations, reinterpretations of information in their environment, and corporal personal experience. In our study, we propose the term "medical common-sense," drawing from C. Geertz's conception of common sense, which encompasses an assembled and reassembled, evolving, and constructed "interpretation of the immediacies of experience" (1975: 2).

Individual strategies for navigating uncertainties associated with lived iatrogenic risks

While facing the uncertainties described above, our participants have developed strategies to navigate the challenges associated with iatrogenic risks.

Medication moderation, avoidance, and compensatory strategies

The primary strategy involves moderation and avoidance.

> Madame Duret is an 82-year-old former commercial employee who lives in a small town with her husband. She received a secondary school education. Her husband, a retired carpenter, used to own a carpentry business and then worked as an employee. She has three children. She currently lives with chronic refractory pain, fibromyalgia, rheumatism, osteoarthritis, hypertension, and thyroid disorders, and she takes six medications per day and another one occasionally. She also uses alternative and complementary medicine.

She indicated that despite her chronic pain, she limits her use of paracetamol: "One must not do too much [i.e., take too much medication]" […] "I am allowed to use it, but I avoid it because we know that these products are not good for the liver and all that."

Madame Bovet states that they are consequently abiding by the rule of exception: "Sometimes, we really need it. I want to avoid taking anything and everything." Monsieur Courvoisier describes himself as avoiding resorting to statins at all costs, as he views this as a step towards "sparing his stomach." Madame Bovet is wary of succumbing to a medication "spiral": "Sometimes you would have to take a pill to treat the secondary effects of another medication; in this case I would rather not take it than get into the spiral."

Similarly, Madame Duret avoids resorting to sleeping pills and anxiolytics. Despite her severe sleep disorder, she refuses to take sleeping pills: "…if I can manage like that…when you have not slept for three or four nights, the fourth night you sleep better." This strategy is intended to limit the potential negative secondary effects. Several respondents therefore refrained from using antalgic medication. Monsieur

Griset stated the following: "…it helps a little bit …but I don't feel like taking it all day though. Because the truth is, when you take it, it knocks you out afterwards."

In these circumstances, caution and abstinence sometimes also extend to refraining from experimenting with "natural products," as emphasized by Madame Duret, who expressed the following: "As far as natural products go, I do not try any medication that would be inappropriate."

Consequently, patients frequently turn to compensatory strategies to reduce their reliance on conventional medications. Several participants describe resorting to dietary measures as a means of protection against the adverse effects of medications. For example, Madame Duret opts to eat yogurt as a stomach protection mechanism rather than using proton-pump inhibitors. Similarly, some participants avoid taking certain medications, such as anti-inflammatory drugs, on an empty stomach, as mentioned by Madame Bovet. Monsieur Courvoisier, on the other hand, eats apples rather than taking statins. Similarly, some participants have explored non-medication-based strategies. Madame Duret, for instance, opted for an intrathecal pump delivering morphine derivatives to reduce her medication consumption: "In order to have less medication […] in order to limit the use of the Oxynorm, which did not suit me."

In some instances, participants decide to use non-medication therapies or turn to "natural" treatments. We observed two primary approaches to natural treatments. In some cases, participants avoid adding natural or homeopathic treatments to their allopathic treatment, while in others, they use natural treatments to achieve medication sobriety.

Developing experiential expertise

A core strategy developed by elderly individuals resides in developing experiential lay expertise (Epstein 1995). Madame Bovet illustrated how she mitigates underlying uncertainties by leveraging her own knowledge regarding iatrogenic risks: "I know side effects, I am careful […] I know what substance is adequate for each thing. I have integrated it well. I know. It prevents me from taking anything and everything, which I don't feel like doing."

Other participants documented their medication use meticulously over time in notebooks. Several study participants incorporated the reading of medication information leaflets into their self-examination process, to determine if a negative feeling may be assessed as a side effect of the introduction of a new molecule in their cocktail. Monsieur Griset states the following: "I take the medication, and then, if I notice I don't feel good, I look at the information leaflets."

Developing and exercising this experiential knowledge is pivotal to circumventing these uncertainties. As Fainzang has noted, we observe in this case the development of a "lay pharmacovigilance" (Fainzang 2014: 334); individuals develop strategies not only to maximize efficiency, but also to minimize risks. We shall use the

term "lay pharmaceutical vigilance" to distinguish it from "pharmacovigilance" as a formal system. This differentiation is crucial because it distinguishes the systematic approach from individual observations of medication's effects on oneself.

To consolidate their experiential expertise, participants also rely on technologies that enable them to assess treatments' effectiveness. Monsieur Boichat monitors his insulin level as part of this process. Participants may also depend on laboratory analyses ordered by their physicians to evaluate the suitability of consuming new molecules, thereby strengthening their expertise. Monsieur Courvoisier, for example, conducts such controls to identify "which medication causes greater harm than gain." Similarly, using blood tests, Madame Duret regarded positive results as evidence that she has not exaggerated her medication use. This prompts us to question the notion of iatrogenic risks as developed in public health policies. These actors develop individual lay expertise and, in some cases, challenge existing figurations. For instance, while researching information about her thyroid therapy, Madame Duret collected data that she provided to her general practitioner and her pharmacist. She also shared experiential data with her migraine specialist who then used it in treating other patients.

Madame Rosselat, on the other hand, suffered severe adverse reactions while using Chinese herbal medicine recommended by a Chinese medicine practitioner. She reported this incident to her health insurance company, which reimbursed her for the treatments. In these cases, it is evident how experiential pharmaceutical knowledge is employed by study participants to both inform and challenge current medical practices concerning iatrogenic risks.

Living with iatrogenic risks in chronos, kairos and aevum temporalities

Our participants navigate different temporal modalities. They live within a "chronos system" where the clock relentlessly ticks, age advances and, for most, the burden of managing pathologies and the associated medications accumulates. Despite witnessing the "mere passing of time" (Svendsen et al. 2018: 23), their perception of time is marked by inexorability. Regarding their medication regimen, it is unlikely that their prescriptions will become less complex. Thus, the passage of time frequently translates into heightened medication-associated risks. As discussed previously, Madame Rosselat anticipates the time when she will encounter liver or kidney problems due to her polypharmacy. This mirrors another Greek mythical reference to living under the Sword of Damocles, a sentiment shared by many participants:

> Because it's true that it does improve health. But I think that on the other hand, it must alter certain things. If one day someone says to me: 'you have a sick liver,' I won't be surprised. Or the kidneys, that's it. That's why we check twice a year. (Madame Rosselat)

In certain circumstances, one might argue that polypharmacized individuals live in a state akin to "aevum," especially when they undergo altered states of consciousness. For instance, two participants have described feeling "out of it" during extended uses of morphine. However, all participants reject this altered perception of time and choose to discontinue opioid use when the dosage is too high or when it induces a distorted perception of reality. Madame Rosselat, for example, stated the following: "TARGIN is a morphine derivative—I don't take it more than three days in a row because after that I can't remember my name… my memory isn't as good, my head is fuzzy, it's no fun."

The lives of polypharmacized individuals are also characterized by kairotic moments. Drawing on Taylor's interpretation of kairos (2007), these are instances when "extraordinary things occur that break everyday life routines" (Derbez 2018: 14). Several experiences within the realm of polypharmacy can be described as kairotic times. To illustrate this, medication-related accidents constitute a departure from the ordinary routine of daily life. For example, Monsieur Griset recounts an incident of accidental overmedication that resulted in hospitalization.

> So, they told me: "You did well to come because… it could have been… something serious. And if it happens again, you come straight away. And then they changed the medicine.

As cited earlier, Madame Rosselat also recalls her intense experience, as the Chinese herbs she was counseled to use triggered adverse reactions. Some medical appointments may become life-altering consultations; receiving laboratory or tests results may be of immense significance, as they indicate positive or negative news. Similarly, medical consultations are in some cases moments of revelation that may have major significance for the future.

> Monsieur Treboux is an 80-year-old retired sales representative living with his wife in the countryside. He suffers from diabetes and non-alcoholic liver cirrhosis and currently takes seven medications per day.

He expressed that learning about his liver cirrhosis diagnosis was a life-altering moment for him: "Around three years ago, I said, ""Now I have for how long?" And then the… the diabetologist he said to me, 'don't make any… any big commitment to more than a year and a half.' So, it's up to me to make an interpretation."

Conversely, some consultations and encounters can be deemed auspicious. These are the moments when participants discover solutions that enable them to reduce their medication intake or acquire new insights into appropriate medication usage. In this regard, polypharmaceutical interviews led by pharmacists can be viewed as transformative and positively life-altering.

Additionally, these uncertainties significantly influence how individuals' perceptions of time become intertwined with their daily experiences of chronic illnesses and polypharmacy. Many participants in our study have multiple health conditions, necessitating several medical appointments per month and, in some cases, daily or weekly visits from healthcare professionals. Their lives are frequently punctuated by these medical appointments and check-ups. Living with several pathologies and with polypharmacy transfigures their relationship with time. It becomes marked by their medication routines throughout the day and the medical appointments they attend over the course of months. These uncertainties regarding their health and medication usage serve as the foundation for the strategies that participants develop to address doubts associated with high medication consumption.

Strategies employed by pharmacists to address uncertainties associated with iatrogenic risks

These dynamics are intricately interwoven with other social domains that influence individuals' practices in relation to iatrogenic risks. Pharmacists play an essential role in the transformation of individuals' experiences of iatrogenic risks.

We conducted interviews with four pharmacists who collaborated with us in the study. They facilitated participant recruitment within their pharmacies (in situ) and allowed us to observe the polymedication checks (PMCs) they conducted with study participants. Two of the pharmacists were managers in a large pharmacy chain, with one located in the city center of a major city (pharmacist 1) and the other on the outskirts of a large city in Switzerland (pharmacist 2). Another pharmacist worked in an independent pharmacy in a very small town in Switzerland, primarily serving patients from rural areas (pharmacist 3). The last pharmacist was the owner of an independent pharmacy in a small town in Switzerland (pharmacist 4).

We uncovered three practices employed by pharmacists to address the challenges associated with iatrogenic risks arising from polypharmacy. These practices include a) pharmacists making calls to physicians to seek prescription clarifications or to notify them of potential inconsistencies or incompatibilities, b) the utilization of clinical decision support software, and c) the conduction of polypharmacy interviews.

Calling the physician to obtain prescription clarifications

To manage the risks associated with polypharmacy, pharmacists must perform several verifications. One interviewee described her role as the "patient's last safety net" because she is the final health professional responsible for verifying prescriptions, dosages, and the medications that her patients consume before delivering them (Pharmacist 2, February 27, 2020). Pharmacists do not have access to a complete patient file containing all medical information regarding the patient, as the

"Dossier Électronique du Patient (DEP)," housing comprehensive medical records, is still in the process of implementation and has not been universally activated by all patients (Bünzli et al. 2023). In Switzerland, health insurance is not free. It is provided by private companies and is mandatory for all residents. Patients can choose their health insurance provider among approximately 60 insurers. The pharmacists we interviewed in 2020 did not have access to patients' electronic files, and physicians do not transfer any medical information to them. A pharmacist we interviewed described operating "blindly," "guessing" the patient's diagnosis, and "reconstituting" the consultation and being relegated to the role of "drug merchant", who "doesn't need to know" (Pharmacist 2). In such cases, pharmacists frequently need to call physicians to obtain clarifications regarding prescriptions, a process that requires diplomatic skills and is embedded in the power dynamics between physicians and pharmacists. In a context where physicians can recommend different pharmacies, maintaining a positive relationship with the provider is of critical economic importance for pharmacists. Trust in one's physician is frequently regarded as a cornerstone of a patient's treatment 'adherence' or appropriation. The pharmacists we interviewed also emphasized that trust between the pharmacist and the physician is a crucial element in resolving prescription clarification issues.

Using clinical decision support systems

Furthermore, to mitigate polypharmaceutical uncertainties, clinical decision support systems have become ubiquitous in pharmacies. These systems flag potential drug–drug interactions and provide information about their severity. Pharmacists may use their judgment to interpret this information considering whether the patient has previously experienced these medication combinations. However, these systems, while considered indispensable, can be problematic, as they "always pop up," potentially creating a "false sense of security" (pharmacist 2).

The temptation to rely solely on the tool's output underscores the importance of maintaining a dialogue between the pharmacist and the patient to assess the potential severity of the risk and its detectability. Consequently, this dialogue must remain linked to the traditional role of pharmacists in discussing the patient's experience with these medication associations.

Performing polymedication checks

Polymedication checks (PMCs) offer a glimpse into how issues involving polypharmaceutical iatrogenic risks are intertwined with more global economic and political concerns, shedding light on ongoing power dynamics. PMCs, a service offered in Switzerland, enabled polymedicated patients to engage in 20-minute discussions with their pharmacist to address medication-related issues, including interactions, understanding the purpose of education, and increasing medication confidence and adherence (Krähenbühl et al. 2008; Messerli et al. 2018). These PMCs represented a

major advancement in defining the pharmacists' role in Switzerland by emphasizing their specific training and dispelling the perception of their "drug merchant" role. It also underscored the pharmacists' qualifications as healthcare professionals capable of providing recommendations. Notably, this service was reimbursed by insurance companies and did not require a physician's prescription. One of the pharmacists we interviewed revealed that the pharmacy chain he worked for placed particular emphasis on polypharmacy interviews, accounting for approximately half of the PMCs conducted nationwide. Employees were encouraged to conduct these interviews, with PMCs listed as part of their annual corporate objectives (Pharmacist 1, February 3, 2020). Interestingly, representatives from this chain described the service as non-commercial and viewed it as a public health commitment. The incentive was not primarily commercial but to enhance the public image of pharmacies as providers of patient-centred care and to elevate the profession's profile as service providers. Identifying the profession as service providers was regarded as vital by this pharmacy chain. However, reimbursement for these interviews was rescinded after a six-year trial period. Another pharmacist, well-versed in local financial dynamics within the pharmaceutical and insurance sectors, stated the following: "insurance companies are not willing to reimburse simply for the sake of patients' trust in their treatment. Proof of safety, efficiency, and cost effectiveness" was not established (Pharmacist 4, March 7, 2020). Most pharmacists were unwilling to advocate for the ongoing reimbursement of this service, as they perceived it as not being cost-effective. This perspective was described by a pharmacist working for an independent pharmacy in a small town in Switzerland (Pharmacist 3, February 26, 2020).

Discussion

Medication users as key actors of the transfiguration of their lived iatrogenic risks

In response to the uncertainties related to iatrogenic risks, individuals employ various strategies. Participants in our study drew upon experiential pharmaceutical knowledge to confront these uncertainties. They actively informed and challenged prevailing medical practices concerning iatrogenic risks. However, these efforts were undertaken individually within the context of their interactions with healthcare practitioners, operating in parallel rather than in coordination. We observed incremental parallel transfigurations of practices for assessing iatrogenic risks.

Although these learning processes and challenges are typically experienced by individuals separately, it is important to recognize that information circulates among patients and caregivers (Fainzang 2001), particularly among patients who suffer from chronic illnesses. Over the course of their medical trajectories, patients'

representations are likely to be largely influenced not only by medical discourses but also by natural therapists and pharmacists. Individuals frequently discuss their personal medical concerns with friends and family, and some may join patient associations dedicated to scrutinizing the iatrogenic effects of medications. Furthermore, we consider that medical professionals play a crucial role in facilitating the dissemination of these individual medical experiences, thereby transfiguring individual separate experiences of polypharmacy-induced risks.

Individuals also cultivate experiential expertise and develop lay pharmaceutical vigilance practices and discourses, adopting precautionary strategies. These strategies are often intertwined with broader medication-related concerns that surface among our study participants' discourses. There is a prevalent skepticism directed towards pharmaceutical companies, which participants frequently describe as prioritizing corporate and financial interests over individual access to health. These pharmacovigilant practices are closely connected to a more general aversion to "chemical" products with a preference for natural alternatives. In some instances, they align with global ecological concerns, reflecting a desire to detoxify both the planet and our bodies.

The presence of this "ecological discourse" among the elderly has been documented for some time (Collin 2001). However, our findings suggest that it has gained greater prominence on a global scale, influenced by policies and advertising campaigns aimed at addressing climate change. Additionally, local political and cultural imperatives in Switzerland, exemplified by referendums regarding synthetic pesticide use in agriculture and waste management policies, have contributed to the amplification of these concerns.

Medication moderation dynamics are exhibited by our study participants and are also co-constructed and interwoven with more global, institutional dynamics. This is evident in the implementation of deprescribing policies in hospitals and nursing homes (Cateau et al. 2020) that are co-constructed with evolving institutional, and hospital offers. For instance, advancements in pain treatment technologies, observed in the pain clinic we studied, contribute to reducing medication usage or dosages, in alignment with the global deprescribing movement. It is noteworthy that moderation practices among poly-medicated elderly individuals extend to the use of "natural" products, thereby deconstructing the preconception that simply switching from chemical to natural products is a magical solution that addresses iatrogenic risks. This observation lays the foundation for further research into the perceptions of polyherbacy-associated iatrogenic risks among the elderly and the wider population.

In this sense, the transfiguration of iatrogenic risks precipitated by individuals' own vigilance is intertwined with global criticism directed at pharmaceutical companies, the growing international preference for "natural" and local products, and decisions made at the local political level. Individual transfigurative actions related

to perceptions of uncertainty regarding iatrogenic risks intersect with global and local dynamics.

Lived iatrogenic risks across kairos, chronos, and aevum temporalities

Individuals living with polypharmacy experience uncertainties within various temporal frameworks. To better interpret these notions, we will examine more closely the literature describing these concepts. Wheater describes *kairos* as "a favorable moment, an opportunity, what one would call today the 'appointed time,' the 'crucial moments,' or the 'best times'" (Wheater 2022: 12). Lanz notes that Ramo's description of kairos (1999) was "originally named from the Greek god of the favorable moment" (Lanz 2021: 2). For Trapani and Maldonado (2018: 271), "it has enabled granular distinctions between closely related notions like the 'opportune,' the 'appropriate,' and the 'possible'". "Kairos can be considered in itself as an event. Indeed, the specificity of kairotic time appears especially when extraordinary things occur that break everyday life routines" (Taylor 2007; Derbez 2018: 14). Kairos has been described as "one of the deities of 'magical moments'" (Adam 2004: 8) and as the "God of lucky coincidence and the right moment for favorable action" (Derbez 2018: 14). Regarding action and its effectivity, every moment is not equal. There are "good" and "bad" moments.

Chronological time (chronos) is the conception of time that holds great significance in our secular modern era (Taylor 2007). It refers to uniform, repetitive time composed of hours, minutes, and seconds that can be measured, "what is commonly called the clock-time" (Derbez 2018: 14).

Within the chronos temporality, individuals' polypharmacy becomes integrated into their daily routines, and they address it by incorporating it into their temporality. As the number of their pathologies and medication regimens increases, individuals' perception of time becomes transfigured. Their lives become punctuated by their medication use and medical appointments.

When viewed through the lens of aevum, the lived experience of iatrogenic risks is one that participants reject when they cannot actively participate in the transfiguration of their experiences of uncertainties. This is an indication that individuals are not passive observers of various temporalities. They actively incorporate their medication routines into their chronological time, which they embrace. However, they reject medication that induces an altered state of consciousness—an 'aevum' state—where their agency is diminished.

Experiences of iatrogenic risks are prevalent within kairotic time, which occurs during life-altering events, such as medication accidents or when patients discover medication-induced complications. Kairotic time is also at hand during polymedication checks (PMCs) when patients learn more about their own treatment. During these kairotic moments, actors from various social domains converge. Particu-

larly during emergencies, all actors cooperate to transfigure iatrogenic risks, such as when a medication accident occurs.

Pharmacists' practices that transfigure individuals' experiences of iatrogenic risks and their perception of time

Uncertainties are undergoing transfigurations due to technological advancements over time. The use of computer-assisted analysis and various forms of software by physicians and pharmacies has exerted a profound impact on the provision of instantaneous answers related to polypharmaceutical risks. Similarly, the development of DEP is expected to accelerate access to information for both individuals and health professionals. This technological development is progressively transfiguring perceptions and practices related to polypharmaceutical uncertainty. It is also reshaping the power dynamics among health professionals and changing the nature of relationships between patients, physicians, and pharmacists. The computerization of pharmacists' practices and the DEP will contribute to merging various temporalities experienced in parallel by patients, physicians, and pharmacists.

The strategies developed by pharmacists to address polypharmacy-induced risks underscore the fact that patients, physicians, and pharmacists operate within a similar clock time, but their temporalities diverge. Pharmacists, who bear responsibility for ensuring the safety and suitability of treatments and their delivery, operate within a distinct temporal framework compared to primary care physicians. They receive the prescription after the doctor–patient consultation and engage in a distinct interaction with the patient.

This discrepancy also underscores the fact that various interconnected social domains evolve within different economic temporalities. Economic considerations play a pivotal role in mitigating polypharmacy-induced uncertainties. PMCs, for instance, could empower patients to better comprehend and manage their treatment. However, the sustainability of such services is subject to national economic and legal rationales, frequently determined by national pharmacist organizations (Swissmedic) assessing the safety of therapeutic products and the economic feasibility of these interventions. For patients, their economic temporality revolves around their monthly health insurance payments and other healthcare-related expenses, which are intertwined with their broader financial circumstances. Pharmacists find themselves navigating multiple temporalities, including those of patients, physicians, insurance companies, and the legal bodies that dictate the duration of PMCs and whether they will continue to be reimbursed.

Global transfigurations of lived iatrogenic risks

The issues surrounding iatrogenic risks among polypharmacized elderly individuals are of global concern, generating scientific research across various domains, including pharmaceutical research, health economics, computer sciences, medical sciences, and chemistry. Software developed to facilitate medical decision-making, for instance, might be created in Canada[8] and subsequently be sold and utilized in locations as distant as Madagascar or New Zealand. The collective efforts to mitigate uncertainties related to polypharmaceutical iatrogenic risks are, indeed, global in nature.

Furthermore, certain historical and global pharmaceutical events can be considered pivotal and transformative, contributing to shifts in how the pharmaceutical industry is portrayed in the media and perceived by individuals. For example, the Vioxx scandal in the USA in 2004 left consumers skeptical of the pharmaceutical industry's vested interests. A similar event occurred in France when the Mediator treatment was trialed. More recently, the pharmaceutical company Purdue Pharma, known for producing opioids, has faced numerous legal charges. Their marketing strategies have been criticized for inducing opioid dependency among the patients they were serving. These events have further intensified the critical attitudes held by the media and the public toward pharmaceutical companies. These incidents resulted in a long-lasting paradigm shift, eroding people's trust in the pharmaceutical industry. These paradigm shifting events may be interpreted as kairotic times, crucial moments, which played a pivotal role in a global transfiguration in the perception of the pharmaceutical industry. Patients became more critical toward them and more cautious in their medication use. These historical events induced institutionalized doubt and precipitated the emergence of deprescribing movements, such as the "less is more" movement in the USA, the "overdiagnosis" movement in the United Kingdom and Australia, and the "Smarter Medicine" movement in Switzerland (Angel 2004; Goldacre 2012). Transfiguration, in this context, should therefore be understood as a dynamic process of evolving social representations.

Conclusion

Elderly individuals living with polypharmacy in Switzerland encounter a multitude of uncertainties linked to their high medication intake. These uncertainties encompass questions regarding the potential outcomes of their medication cocktails, including which specific medications might pose risks and the nature of harm that

8 Canadian software used globally which helps professionals and patients to reduce their medication use.

could result. They are aware that not every medication combination used by elderly persons can be subject to scientific study. These uncertainties find expression in common-sense medical discourses.

In response to these uncertainties, individuals develop various mitigation strategies. These strategies encompass medication sobriety, avoidance, and compensatory measures. Additionally, individuals cultivate lay pharmaceutical vigilance practices. They often express concerns about the perceived "unnaturality" of pharmaceuticals, the inherent toxicity of "chemical products," and the influence of consumerist society and profit-driven pharmaceutical corporations. In their quest to navigate uncertainty, they construct a "medical common sense" to interpret and cope with the uncertainties associated with polypharmacy-induced risks.

While public health policies typically frame these risks as adverse events that are "combated by both the health insurance system and health professionals" and that "affect mostly the elderly "[authors' translation]"[9] our findings suggest that individuals themselves also play an active role in combating iatrogenic risks, thus transfiguring their own experiences. They are not merely passive recipients of protective measures provided by the healthcare system; they are also proactive agents in evaluating and exercising vigilance over their own polypharmaceutical regimens.

The research conducted by Kehr et al. (2019) highlights the intricate interplay between the practices of individuals and healthcare professionals, situated within economic and power dynamics operating at both local and global levels. Our study revealed that these practices are embedded in complex economic and power dynamics, which operate on an individual level and on a meso-social level. Representations of iatrogenic risks have become deeply ingrained within evolving local institutional and hospital policies, in alignment with the emerging global trends that prioritize medication sobriety and deprescription practices.

The use of the transfiguration concept allows us to delve deeper. The transfiguration of uncertainties in polypharmaceutical practices may be understood in various ways. For individuals living with polypharmacy, their perception of time is transfigured. Their perception of chronos, or "clock-time," becomes increasingly intertwined with the timing of medication intake throughout the day and their adherence to medical appointments over the course of the year. They also encounter kairotic times, wherein medication accidents or medical appointments take on life-altering significance.

The transfigurative role of time in the lives of individuals living with polypharmacy operates at the individual level. Individuals' lay vigilance practices also transfigure several figurations. When narrating their firsthand experiences of iatrogenic

9 https://www.ameli.fr/assure/sante/medicaments/medicaments-et-situation-de-vie/iatrogenie-medicamenteuse; last accessed on 24.11.2023

risks, they have the potential to influence the practices of healthcare professionals and, in some instances, to impact the policies of health insurance providers.

Pharmacists' temporalities also differ from those of physicians and patients. Their capacity to mitigate polypharmaceutical uncertainty hinges on their ability to navigate the power dynamics between physicians and pharmacists. Additionally, they are subject to various economic temporalities, including decisions made at the national level, deeming polymedication checks (PMCs) non-cost effective. The evolution of information technologies, such as the use of DEP and software supporting clinical decision-making, also results in the transfiguration of pharmacists' processes and temporalities involved in solving polypharmacy-associated uncertainties. Consequently, interactions between different social domains are also transfigured.

On a global level, some pharmaceutical "scandals" have unleashed transformative effects by eroding public confidence in the pharmaceutical industry. These events have contributed to the transfiguration of uncertainty in pharmaceutical use.

In summary, elderly individuals and pharmacists are essential actors in the transfiguration of iatrogenic risks. They are entangled in broader dynamics, including reimbursement policies, pharmaceutical controversies generating media attention and growing skepticism toward the pharmaceutical industry. This entanglement is also rooted in global and local shifts in attitudes toward chemical and imported products. Polypharmacized individuals reject medications that cause unwanted side effects. They avoid medications that would confine them to an 'aevum temporality', which would make them passive participants. It is crucial for them to exercise lay vigilance over their polypharmacy. This underscores the vital role polypharmacized individuals play in reshaping their experiences of iatrogenic risks. Their control over the temporality in which they live is a critical factor in this process. Individuals and pharmacists often operate under distinct temporal frameworks. For pharmacists, chronos time revolves around selling merchandise and preventing medication accidents, while individuals' chronos time involves incorporating medication consumption into their daily lives. However, their temporalities intersect during kairotic moments, particularly in emergencies when the risk ceases to be a mere possibility and becomes a reality, as in the case of medication accidents. In such situations, both parties strive to draw upon their accumulated experiences during their separate chronos time. They can then integrate the new knowledge acquired in this kairotic time to enhance their understanding and practices of polypharmacy in their chronos time. Ultimately, kairotic time enables them to jointly transfigure the experiences of iatrogenic risks.

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References

Adam, Barbara. 2004. Time. Cambridge and Malden, MA: Polity Press.

Angell, Marcia. 2004. The Truth About the Drug Companies: How They Deceive Us and What To Do About It. New York: Random House Trade Paperbacks.

Buclin, Thierry, Rose-Anna Foley, and Francoise Livio. 2019. Pharmacovigilance, Hémovigilance, Vaccinovigilance, Tératovigilance…: Quelles Retombées Imprévues pour les Patients, Les Intervenants De Santé Et Les Systèmes De Soins? Anthropologie & Santé 19. https://doi.org/10.4000/anthropologiesante.4937.

Bünzli, Dominique, Sylviane Boissard, Philippe Eggimann, and Vladimir Mayor. 2023. Dossier électronique du patient: les médecins dans l'expectative. Revue Médicale Suisse 19(828): 1055–1057.

Cateau, Damien, Piertluigi Ballabeni, Stéphanie Mena, Olivier Bugnon, and Anne Niquille. 2020. Deprescribing In Nursing Homes: Protocol for Nested, Randomised Controlled Hybrid Trials of Deprescribing Interventions. Research in Social and Administrative Pharmacy 17(4): 786–794.

Collin, Johanne. 2002. Observance et Fonctions Symboliques Du Médicament. Gérontologie Et Société 25/ N103(4): 141–159.

Démolis, Rachel, and Fazia Benhadj. 2020. Le Film De Recherche Comme Modalité De Production d'un Discours Scientifique En Anthropologie De La Santé. Anthropologie & Santé 21. https://doi.org/10.4000/anthropologiesante.8141.

Derbez, Benjamin. 2018. Is There A "Right Time" For Bad News? Kairos In Familial Communication on Hereditary Breast and Ovarian Cancer Risk. Social Science & Medicine (202): 13–19.

Epstein, Steven. 1995. The Construction of Lay Expertise: Aids Activism and The Forging of Credibility in The Reform of Clinical Trials. Science, Technology & Human Values. 20(4): 408–437.

Fainzang, Sylvie. 2001. Médicaments Et Société: le Patient, le Médecin et l'Ordonnance. Paris: Presses Universitaires De France.

Fainzang, Sylvie. 2014. Managing Medicinal Risks in Self-Medication. Drug Safety 37(5): 333–342.

Fainzang, Sylvie, and Ashley Ouvrier. 2019. Face aux risques médicamenteux. Dossier Thématique. Anthropologie & Santé 19. https://doi.org/10.4000/anthropologiesante.5261.

Geertz, Clifford. 1975. Common Sense as A Cultural System. The Antioch Review 33 (1): 5–26.

Goldacre, Ben. 2012. Bad Pharma: How Drug Companies Mislead Doctors and Harm Patients. London: Fourth Estate.

Kermode, Frank. 2000 [1967]. The Sense of An Ending: Studies in The Theory of Fiction. Oxford: Oxford University Press.

Kehr, Janina, Hansjörg Dilger, and Peter van Eeuwijk. 2019. Transfigurations of Health and the Moral Economy of Medicine: Subjectivities, Materialities, Values. Zeitschrift Für Ethnologie 143 (1): 1–20.

Krähenbühl, Jean-Marc, Anne Decollogny, and Olivier Bugnon. 2008. Using the Co sts of Drug Therapy To Screen Patients For A Community Pharmacy-Based Me dication Review Program. Pharmacy World & Science 30(6): 816–822.

Lalic, Samanta, Janet Sluggett, Jenny Ilomäki, Barbara Wimmer, Edwin Tan, Leonie Robson, Tina Emery, and Simon Bell. 2016. Polypharmacy and Medication Regimen Complexity as Risk Factors for Hospitalization Among Residents of Long-Term Care Facilities: A Prospective Cohort Study. Journal of the American Medical Directors Association 17(11): 1067.e1–1067.e6.

Massé, Raymond. 1986. Culture et Santé Publique: Les Contributions de L'anthropologie à la Prévention et à la Promotion De La Santé. Montréal, Paris, Casablanca: Gaëtan Morin.

Mattes, Dominik, Bernhard Hadolt, and Brigit Obrist. 2020. Introduction: Rethinking Sociality and Health through Transfiguration. MAT-Medical Anthropology Theory 7(1): 66–86.

Messerli, Markus, Noortje Vriends, and Kurt Hersberger. 2018. Humanistic Outcomes and Patient Acceptance of The Pharmacist-Led Medication Review "Polymedication Check" In Primary Care in Switzerland: A Prospective Randomized Controlled Trial. Patient Prefer Adherence (12): 1071–1078.

Niles, Paulomi Mimi, Saraswathi Vedam, Amy Witkoski Stimpfel, and Allison Squires. 2021. Kairos Care in A Chronos World: Midwifery Care as Model of Resistance and Accountability In Public Health Settings. Birth 48(4): 480–492.

Taylor, Janelle. 2008. On Recognition, Caring, And Dementia. Medical Anthropology Quarterly 22(4): 313–35.

Trapani, William, and Chandra Maldonado. 2018. *Kairos*: On the Limits to Our (Rhetorical) Situation. Rhetoric Society Quarterly 48(3): 278–286.

Wheater, Kitty. 2022. No Time Like the Present: Mindfulness, Temporality and the Therapeutics of Kairos. Anthropology Today 38(2): 9–12.