



Prize Winner

The Retirement Reckoning—When Family Ties Clash with Financial Realities

Stefanos Orfanos, FSA, CERA

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To address the Society of Actuaries' 2024 call for AI and LLM research in retirement planning, this essay explores a creative approach: a narrative examining the Johnson family's experience. The Johnsons' story lays bare the real-world implications of AI advice in navigating retirement choices, extending beyond just assisted living transitions. Their struggles highlight the need to balance AI's insights with human empathy for informed, compassionate choices. The time horizon under consideration is both current and future.

This narrative is the result of a unique collaboration between human and machine. While Dr. Orfanos provided the core storyline and direction, the details and some surprising twists were generated by artificial intelligence. Three different AI systems were involved in this process: Claude from Anthropic, ChatGPT-4 from OpenAI, Gemini from Google and finally, me. The long sequence of prompts and responses have been included in the Appendix.

PART 1

The Johnson home, nestled in the verdant suburbs of Atlanta, had become a battleground of silent struggles and unspoken fears. Michael, once the family's stronghold, now faced his days confined to the dimly lit basement, his once-active life curtailed by the relentless progression of diabetes. The stairs to the rest of the house stood like an insurmountable barrier, a daily reminder of his lost independence.

Kathy, balancing her roles as caregiver, wife, and financial provider, found herself stretched to breaking point. Between her two jobs at the assisted living facility and the local hospital, she also contended with her own looming health issues, including chronic back pain and the threat of pre-diabetes.

Sarah, their 27-year-old daughter, seemed to live in a parallel universe. Her reality, largely shaped by the digital escapades in the world of Japanese anime and virtual forums, left her detached from the escalating crisis at home. With no job to her name and only a GED, her understanding of their predicament was superficial at best.

The fragile veneer of normalcy shattered one evening when Michael's health took a dramatic turn. A severe hypoglycemic episode left him unconscious in the basement, a harrowing reminder of their precarious situation.

Gathered around the old kitchen table, where layers of wear marked countless family meals, the air was thick with tension and unvoiced concerns.

"We can't ignore this any longer," Michael said, breaking the uneasy silence. His voice, a faint echo of its former strength, carried a gravity that demanded attention. "This house... it's become a prison of sorts, not just for me but for all of us."

Sarah, feeling a surge of panic, clung to the hope of maintaining the status quo. "There's got to be a solution that doesn't involve upending our lives," she insisted, her voice edged with desperation.

Her search for alternatives led her to an AI decision-support system, designed to provide retirement planning advice. Sarah entered data optimistically skewed, hoping for a recommendation that supported her wishes. The AI suggested in-home care as a feasible option, estimating costs at \$3,000 a month—a figure it presented devoid of the complexities of their real lives.

"See, this says we can manage. We don't have to give up everything," Sarah announced, clinging to the printout as if it were a lifeline.

However, the complexity of their situation was not to be unraveled by algorithms alone. A consultation with Mr. Thompson, a seasoned financial advisor, laid bare the stark realities they faced. The house, valued at approximately \$400,000, could provide a nest egg, but Michael's specialized care could easily consume \$5,000 monthly, leaving little room for error. Sarah's potential independence, with rent prices hovering around \$1,200, added another layer of financial strain.

"The AI provides a snapshot, based on the figures you input," Mr. Thompson explained, his tone measured but firm. "But it can't foresee the fluctuations in health, the market, or account for the emotional cost of such decisions. It's not just about the numbers; it's about your lives, your wellbeing."

The dialogue between Sarah and Mr. Thompson grew heated as they delved deeper into the AI's recommendations versus the tangible reality of their situation. "But if the AI says it's possible, shouldn't we consider it?" Sarah argued, her faith in technology clashing with the advisor's pragmatic outlook.

"It's one thing to consider it, Sarah, but another to rely on it entirely," Mr. Thompson countered, emphasizing the limitations of a purely data-driven approach in navigating life's uncertainties.

PART 2

The kitchen, once the heart of the Johnson home, had transformed into a makeshift command center for their crisis discussions. Papers, bills, and the ominous printout from the AI decision-support system littered the table. The weight of their situation pressed heavily in the air, challenging the fabric of their family unit.

Kathy, her voice laced with exhaustion, spoke of her anxieties. "Michael, I understand what you're saying, but we've put so much into this home. It's not just about the money; it's our memories, our life together. Can we really just walk away from that?"

Michael met her gaze with a mixture of sorrow and resolve. "Kathy, I know, and I hate that we're even in this position. But my health... it's not just going to get better. And Sarah," he glanced at his daughter, "needs a chance to build her own life, not be stuck in this cycle with us."

Sarah, caught between her parents' exchange, felt a pang of guilt. Her earlier optimism, fueled by the AI's recommendations, now seemed naive. "But the AI was so sure... Are we just ignoring a possible solution because it's not what we expected?"

Mr. Thompson, observing the family's turmoil, sought to steer the conversation towards a middle ground. "The AI's advice isn't without merit—it's just one piece of the puzzle. But it doesn't feel the weight of these decisions. It

doesn't tire. It doesn't worry about the future like we do. It's important to consider all aspects, including those it can't quantify."

The advisor then outlined the stark financial realities further. "Even if we stretch the funds from the house sale, there are variables we can't control. Health emergencies, changes in the cost of care, or even shifts in the housing market for Sarah's rent—these could all derail the plan."

Sarah's frustration mounted. "So, what? We just give up because it's hard? Because there's risk?" Her voice rose, a mix of anger and desperation coloring her words.

"No, Sarah, not give up," Mr. Thompson replied gently. "But prepare. Adapt. The AI offers a path, but we have to be ready for the rocks along the way. And sometimes, that means making the hard choices now to avoid harder ones later."

The conversation shifted as they delved into the specifics of Michael's care needs, the potential costs involved, and the quality of life he could expect in a specialized facility. Kathy shared her fears of becoming overwhelmed, of not being able to be there for Michael in the way he needed. Michael, in turn, expressed his dread of becoming a burden, of watching his family sacrifice their well-being for his sake.

Sarah, feeling the gravity of their situation, began to see the limitations of her reliance on the AI's guidance. "I just wanted to find a way to keep things normal," she admitted, her voice breaking. "But maybe... maybe this is about finding a new normal."

The night drew on as they wrestled with their options, the discussion a blend of financial pragmatism, emotional turmoil, and the painful acknowledgment of their changing realities. The AI's cold logic, for all its precision, couldn't navigate the murky waters of human emotion and the bonds that held the Johnson family together.

As they concluded their meeting, no definitive decision made but with a clearer understanding of their challenges, it was evident that their journey forward would require a balance between the objective input of technology and the nuanced, deeply human insights of their advisor—and of themselves.

PART 3

In the weeks that followed, as they grappled with the conflicting advice, the Johnsons delved deeper into the specifics of Michael's care needs and the financial implications of their decisions. Kathy and Sarah, with Michael's input, began to compile a comprehensive list of assisted living facilities, each visit exposed the varied quality of care and the nuanced costs not initially apparent in their projections.

One particular visit stood out. The facility was pristine, the staff attentive, and the brochure promised an idyllic setting for Michael's care. Yet, when Kathy inquired about staff-to-patient ratios and the handling of medical emergencies, the answers were vague, the confidence of the sales pitch giving way to uncertainty.

"That place looked perfect on paper, didn't it?" Kathy remarked on their drive home, a note of skepticism in her voice. "But digging deeper, it's clear there are gaps. The AI couldn't show us that."

Sarah, who had been holding onto the printout from the AI like a talisman, began to see its limitations more clearly. "It's one thing to read about care options and costs, but seeing it in person, asking those hard questions... it's different."

Michael, too, had his reservations. "I appreciate the effort to find the best place, but I can't help but feel like just another number to these facilities. Mr. Thompson's financial advice is sound, but it's this personal side of things, the reality of living in one of these places, that I'm worried about."

Their search for a suitable facility continued, with each visit informing their understanding of what Michael's care would truly entail. They encountered discrepancies between advertised services and actual care, fluctuating costs beyond the base rates, and the stark realization that the emotional toll of such a transition had been grossly underestimated.

During this period, Mr. Thompson's advice took on a new dimension. While his financial guidance remained invaluable, his inability to fully grasp the personal and emotional aspects of their decision became more apparent.

"I think we expected too much from him," Sarah admitted one evening. "He helped us see the financial reality, but there's so much more to this decision than just numbers."

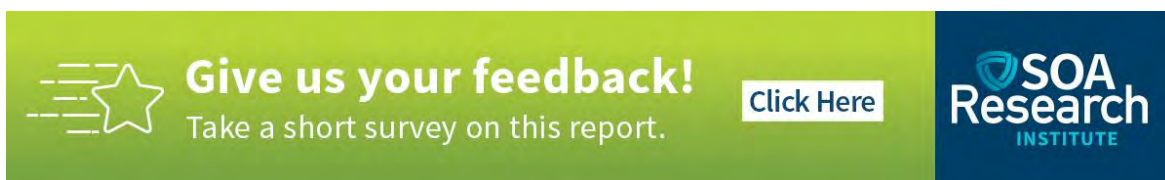
Kathy nodded, weary but determined. "We have to be our own best advocates. Not just for Dad's care, but in making sure we're not sacrificing more than we have to."

This realization marked a turning point for the Johnsons. No longer solely reliant on external advice, whether from AI or financial advisors, they began to trust more in their collective judgment, informed by their research, visits, and the hard questions they'd learned to ask.

As they finally selected a facility for Michael, doing so with a more critical eye and a deeper understanding of the challenges ahead, they prepared for the transition with a mix of apprehension and hope. The path they chose was fraught with potential obstacles, but they were better equipped to face them together, drawing strength from their newfound knowledge and shared commitment to navigating the future as a family.

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Stefanos Orfanos, FSA, CERA is a Clinical Assistant Professor at Georgia State University. He can be reached at sorfanos@gsu.edu.



A banner with a green-to-blue gradient background. On the left is a white star icon with motion lines. To its right, the text reads "Give us your feedback!" in large white font, followed by "Take a short survey on this report." in smaller white font. A white button with the text "Click Here" is positioned to the right of the text. On the far right is the SOA Research Institute logo, which consists of a blue shield icon and the text "SOA Research INSTITUTE" in white.

APPENDIX

Note: The prompts have been kept as entered except for necessary clarifications (in brackets) to preserve the authenticity of this process.

ANTHROPIC'S CLAUDE WAS USED FOR IDEATION

Prompt: In the attached document [Budgeting for Senior Living: Financial Planning Tips and Strategies for Seniors.pdf] there is information about assisted living and other options for retirees. In many cases, senior citizens sell their home to raise enough funds to pursue these options for themselves and their spouse but find out later on that the services provided aren't what was promised in the beginning, or that it gets a lot more expensive to get the care they need. This is a reality today that many elderly folks have to contend with. I am wondering if the emergence of AI tools like yourself can assist in any way these folks in evaluating these living arrangements and making a sound decision for their future, as well as whether AI can provide some of the services they currently pay good money to get. Please also elaborate on the challenges of retirees leveraging effectively this advanced technology. I would like your answer to be comprehensive enough but not exceed 2000 words.

Prompt: This is a good start. You mention decision support systems. How would such a system look like? What information would collect from the retiree before it is able to make a recommendation? Can you build a prototype for such a system? Also, your second point is predictive analytics. Do you have access to data or information that would allow you to analyze trends? You also mention regulatory reports—are these accessible by you? If you don't have access, who do you expect to provide you with the data?

Prompt: Let's test this out. We have Michael and Kathy, ages 61 and 57. Michael has disability (diabetic, can't see very well, his foot has a recurrent wound that prevents him from walking normally) and Kathy is pre-diabetic and has chronic back pain and a few past operations that haven't solved the issue. They own a home in Atlanta suburbs which they just paid off. The home's value is around \$400k. They also have a daughter aged 27 that stays with them and would need to have separate living arrangements if they sell. The daughter doesn't work and has no university education. Michael collects monthly disability payments and Kathy is still working as a nurse but would retire once she reaches 60. No other assets, except for two cars about 8-10 years old. There is a liability of about 40k which is a car loan that will be fully paid in 5 years. In terms of their preferences, they would like to have access to a community of retirees. At the moment, they don't need much in terms of services. However, given Michael's issues with diabetes and a recent scare with his heart, they want to make sure that there is an option for assistance if it comes down to that. In terms of geography, they would like to stay in the Atlanta suburbs. They also don't want to exceed their available assets and burden their other children who have their own families.

Prompt: The article mentioned 5 different options. Were all of them considered? Why was the decision process that you used to arrive at CCRC being the best option, and what would need to change for each of the other 4 options to come out on top in your analysis?

Prompt: Fair enough, I want you to take the analysis done thus far and formulate it as a case study involving the fictional couple of Michael and Kathy. Please imitate the best case studies in how you set up the framework for the important decision that the couple has to make, their investigations into the different living arrangements, and the final decision. Feel free to make up facts whenever necessary to draw a fuller picture and make it more realistic.

Prompt: This is a weak effort. A case study should include crises, dilemmas, a bit more drama than the flat text you created.

Prompt: But what about the daughter?

Prompt: The case study mentions the services of a financial advisor. Can this work be outsourced to AI?

Prompt: But is this realistic? Most of the time, AI is not good at asking the right questions. And do you really have vast knowledge of senior living facilities in the Atlanta suburbs?

Prompt: Please incorporate these aspects into the case study, increasing the dramatic effect by explaining how, with the help of Sarah, they first attempted to get answers via AI, but soon realized its limitations and that having a human financial advisor was indispensable, even if costly. Also reflect the fact that Sarah wasn't on board with her parent's plan to sell the house she had lived her whole life, and she instead pushed for a different plan altogether.

Prompt: This is still too easy. Sarah has no income and can't afford to rent her family home, not to mention if it gets sold, there is no guarantee the new owners would be willing to rent it out. Also, the case has lost some of the finer details that give it more realism, and finally, the fact that the financial advisor agreed with the AI made it less powerful. Not to mention that Sarah should have been the one dabbling in technology.

Prompt: The personalities of Michael and Kathy are very formulaic. Rewrite the whole thing by painting Michael as the one starting the discussions for a senior living arrangement and Kathy being the affectionate mother who has always coddled her daughter Sarah. Also, don't mention the article by name.

Prompt: We lost the connection to AI, which is integral to this story. What if we have Sarah try to oppose Michael's decision by expertly prompting an AI system to obtain a contradictory answer that serves her interest and is persuasive?

Prompt: That's a good effort. But I want you to give more color to the different individuals. Right now, they sound very similar when expressing themselves. Try to exaggerate their personalities a bit so they sound very distinct.

Prompt: This reads a lot better; thank you. But the thing that's still missing is the numbers. Add concrete figures about the home's value, rent, entrance fee and ongoing costs of CCRC. Also, clarify who will be paying Sarah's rent.

Prompt: If the home is sold, how can the family also rent it? This makes no sense!

Prompt: The story now makes no sense. Sarah emotional attachment to the family home is not balanced against Michael's needs and Kathy's devotion because the house is sold. Rewrite the whole story from the beginning, make sure it's internally consistent.

OPEN AI'S GPT4 WAS USED FOR ADDITIONAL NARRATIVE DEVELOPMENT

Prompt: Below is a story about a difficult decision. I want you to eliminate the contradiction in the last sentence of the story and expand the story to be twice as long. Take liberties with adding details to make the characters, events and deliberations more realistic. Story starts here: [draft of essay follows]

Prompt: This is too flaccid. The story should have more clashes, crisis, drama. The role of AI should be highlighted instead of demoted.

Prompt: You changed the story in good ways, but you should still keep Sarah as the never employed daughter with no university education who is advocating for the family home out of fear of change. Also, the financial advisor has to stay. The technology ethicist doesn't sound real. And Kathy has to stay with her husband.

Prompt: The last two paragraphs are fluff, they add nothing. Also, we missed some of the details about Kathy: she is also pre diabetic and with chronic back issues that haven't been resolved even after repeated operations. She currently works two jobs in an assisted living facility and also at a hospital. And Michael's health scare was a great twist that we should retain.

Prompt: This is OK, but is missing some dramatic aspects. Sarah is supposed to prompt the AI system in a way that provides the desired answer. The other thing missing is some of the challenges of living in a senior living facility. What if the quality of care is less than promised? Or if there are hidden costs? Can the sale proceeds stretch long enough to cover their expenses? And who will pay for Sarah's rent once the house is sold?

Prompt: This is only 700 words. We need to double it in length by adding more colorful language and longer dialogue.

Prompt: it's 870 words. We need about 1500 words. Please make the dialog less flowery, less metaphors, but more real and hard. How an African American low income family would speak at home. Kathy certainly loves her husband Michael, but is also tired of serving him and yearns for an unencumbered life. Sarah is lost online most of the day every day, reading Japanese anime and participating in obscure discussion boards. Michael is mostly confined in the basement of the house, without the ability to drive his own truck or not willing to climb the stairs to the upstairs living room most days.

Prompt: This is good, but Michael has totally disappeared as a character with a distinct voice. Before "A decision made", can you add more nuance and perhaps strife?

Prompt: OK, this is good. Give me the full text, from start to finish.

Prompt: Why you didn't incorporate Michael's words into the text? Please do so and give the full case study from start to finish.

Prompt: This is again too short. Rewrite it so that it's 1500 words long. Don't condense the dialog or Sarah's attempt to get AI to give her the answer she wants.

Prompt: continue [to part 2]

Prompt: Now rewrite each part to put added focus into the contrast of the AI serving as a family and retirement planning tool vs the human financial advisor. Don't paint AI as all bad and the human as all good, instead give a more nuanced view.

Prompt: This version is missing all info about Sarah never holding a job down and having just a GED. Add these details and longer strife and break the story into two parts to be able to exceed your 1000 word limit.

Prompt: The length is acceptable but part 2 is very weak. We need more crisis and strife and challenges. And maybe a way to highlight the financial advisor's drawbacks and the benefit of objectivity that the AI system might enjoy. Also, include concrete numbers (value of house, cost of assisted living, cost of rent for Sarah) to increase realism. Once again, break it into two parts to maintain length close to 1500 words.

Prompt: You tend to foretell what conclusion should draw instead of providing a robust story-telling and let the reader draw her own conclusions. Plus you repeat the conclusion too much. Rewrite both parts of this story, making sure you expand and enrich the dialog while limiting the editorializing and repetitions.

Prompt: This is less than 700 words. We want 1500 words or more. Break it into many sequential responses if needed, but provide rich dialog that dramatizes this contrast between AI and human for giving sound retirement advice.

Prompt: continue [to part 3]

Prompt: You have extrapolated the story. What I wanted you to do was to interpolate the story. Instead of adding a lot of waxing lyrically about the aftermath, give more vivid detail of the crisis and the conflicts before the decision has been made. Again, split into several parts to allow for a deeper and richer description.

Prompt: continue [to part 2]

Prompt: continue [to part 3]

Prompt: I like the story up until the conclusion. Missing are the struggles in the assisted living with escalating costs, at times low quality or refused care and Kathy serving as an advocate. Mr Thomson appears wise but we should highlight his own fallibility and human motives that aren't always beneficial. Please re-generate all 3 parts. The first two parts are pretty good already, but the third needs serious edits.

Prompt: You weren't supposed to change the first two parts. And instead of demonstrating Thomson's limitations through his words in part 3, you are editorializing. Once again, generate each part separately, making sure the dialog is robust and there is less commentary about what the meaning of things is.

Prompt: Below you will see Parts 1, 2 and 3. Don't condense anything. Instead add the missing storyline between 2 and 3 to tie them together [draft parts follow]

Prompt: This 3-part fictionalized account is a response to the request for research proposals found in <https://www.soa.org/research/opportunities/2024-impact-ai-llm-retirement/>. Write an introductory paragraph that ties it to the research proposal and explains why this approach is creative and worth considering.

Prompt: Condense a bit and explain what is the connection between retirement planning and the decision for assisted living.

Prompt: Condense in half and avoid repetitiveness. Also, make a more compelling case why this story is relevant to the research proposal.

GOOGLE GEMINI WAS USED FOR ADDITIONAL EDITING

Prompt: Make minor edits to the text below to improve readability, remove any repetitiveness and increase dramatic effect while keeping it realistic and without exaggerations. Don't condense or expand. [draft of essay follows]

Prompt: How about the introductory statement. Any edits? [draft of statement follows]

Prompt: Improve the sentence [draft sentence follows]