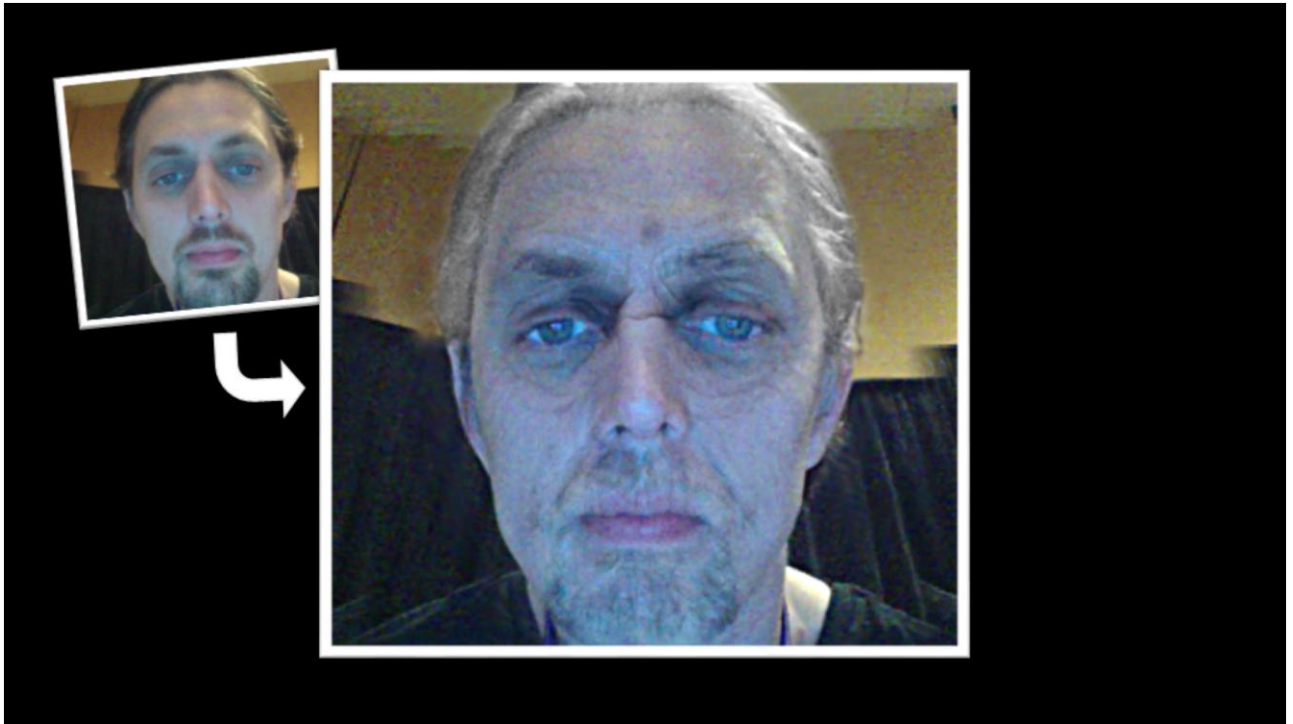




Hi everyone, I'm Bob De Schutter. I'm a Belgian professor and I work for Miami University in Oxford, OH.

And this talk is going to be all about this guy:



Me!

Except, well... I'm not going to talk about the guy you see in the left corner of the slide.

It's actually about the 65-year old version of me, the guy who – according to the internet – will look like the guy in the middle of the slide.

I am very happy that he still has that great head of hair, but he is seriously frustrated with the games that are being marketed towards him and his senior friends. He therefore traveled back in time to tell me to do this talk and change the future. So that's why I am here. Let's change the future. How about that, GDC? Are you with me?

Alright then, let's talk about...

BEYOND AGEISM

# DESIGNING MEANINGFUL GAMES FOR AN OLDER AUDIENCE



How to design games that are meaningful to an older audience.

Which also means that we are also going to address ageism, or the unfair treatment and stereotyping of people based on their age, and how we can move past that as game designers. Now, before I get started, a quick clarification: What does that term “older audience” really mean? Retired people? Senior citizens?

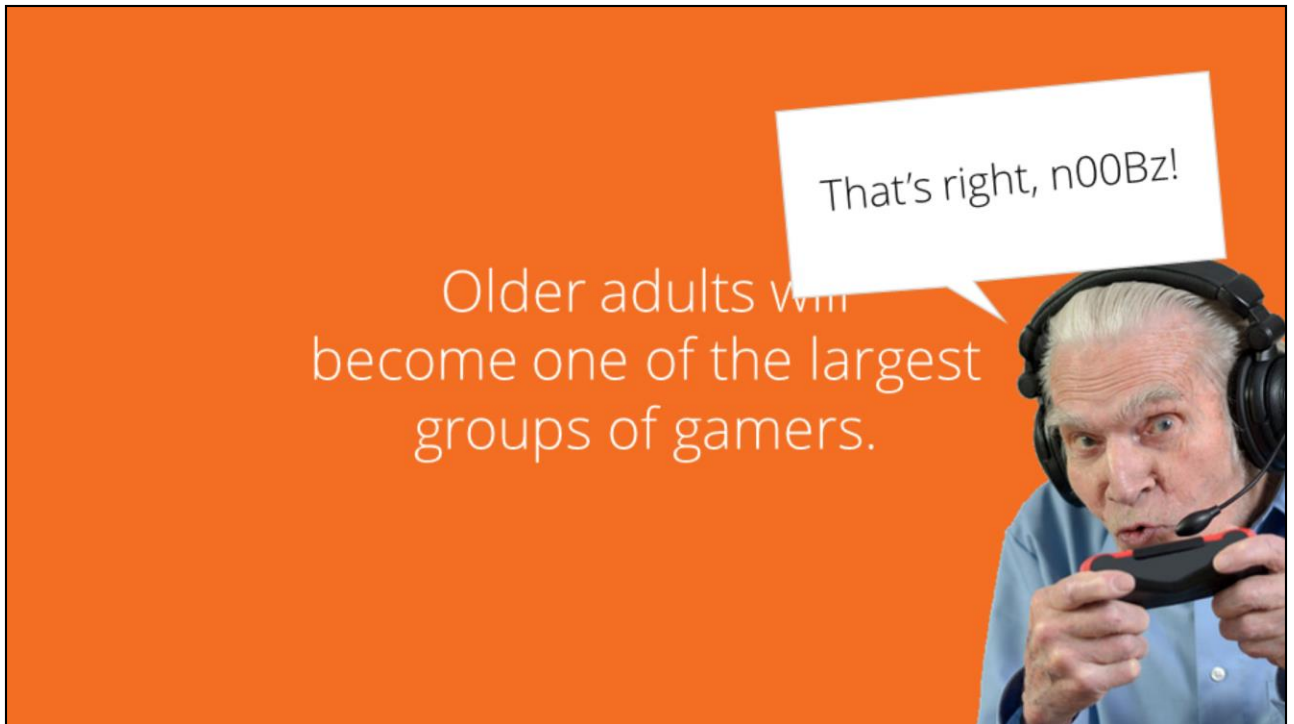
The actual age range differs from author to author, so I went with the average starting age, and that means that I am apologizing to anyone over 50 in the audience, because...



You're part of this demographic!

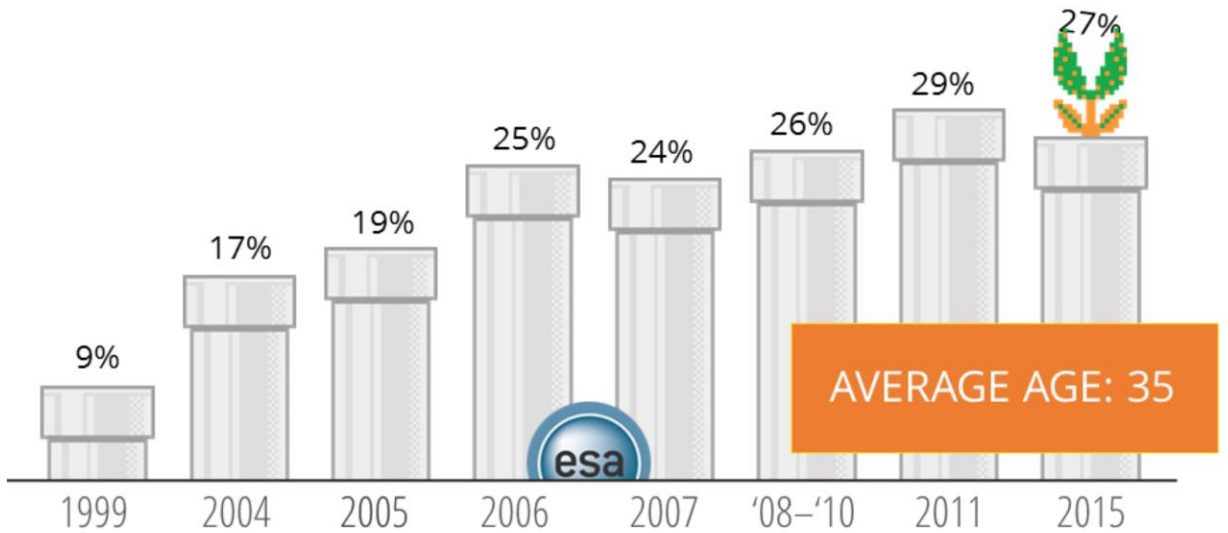
Even if you are actually a very young "older adult".

So let's get to my opening question. Older adults and video games: Why is worth your time, why is this relevant?



Here's why: older adults will become one of the largest groups of gamers. It's a bold statement and I am sure that some of you did not see that coming. I know I did not see that coming 15 years ago when I started my work in this field. So let me explain where I get this from.

PERCENTAGE OF US GAMERS OVER THE AGE OF 50



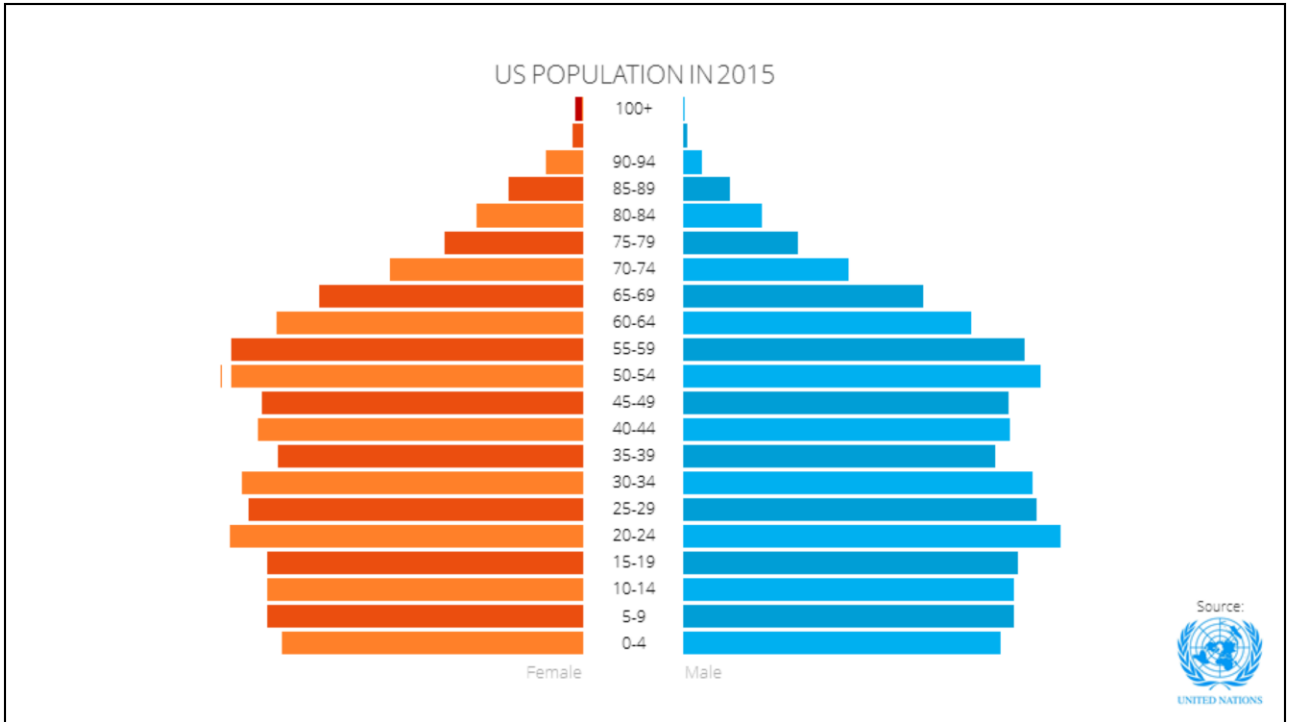
Here is an overview of the Entertainment Software Association's annual facts about the gaming industry. It states that 27% of US gamers are over 50 and that the average US gamer is 35 years old today. Those are already pretty high numbers, and they have been replicated by other studies.



Just look at these numbers from PEW (a US non-partisan think thank), the Interactive Software Federation of Europe, and the Australian Interactive Games & Entertainment Association.

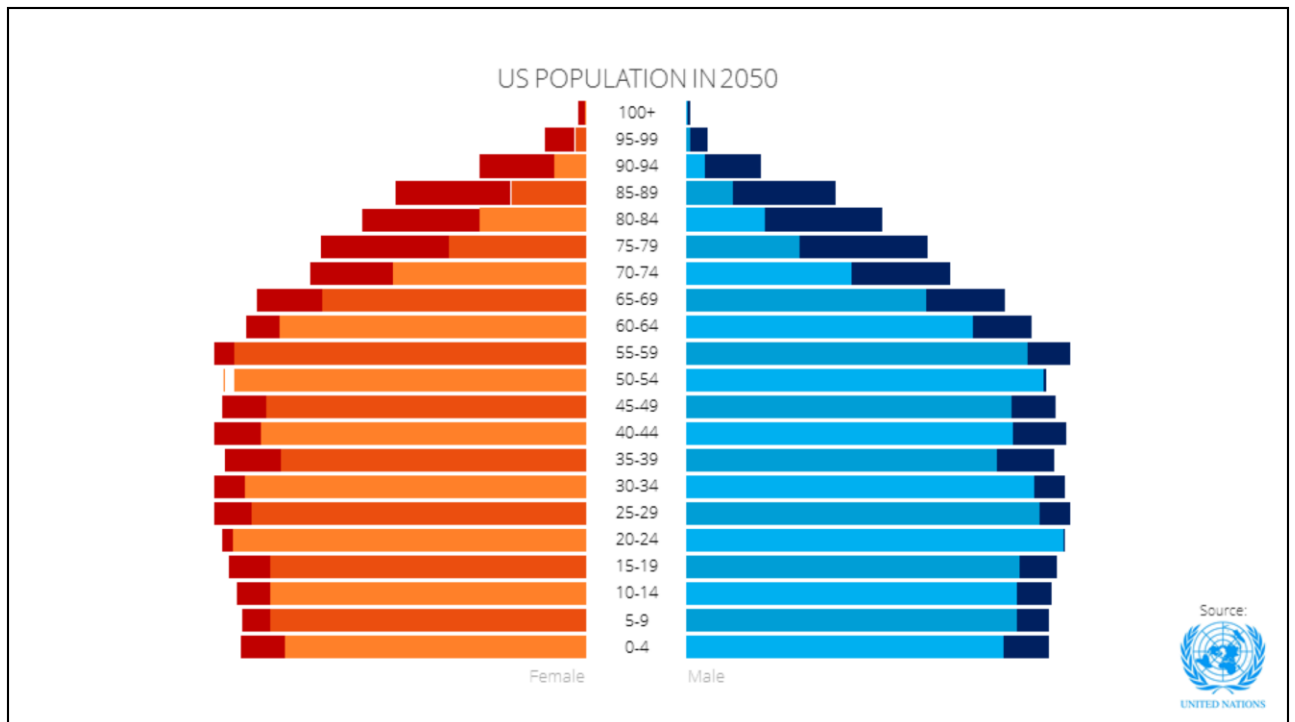
They report a large group of people, and that is one reason why games for older adults are relevant. A lot of them are playing games. As of right now. Today.

Now, here is a different statistic.



This is what our age pyramid looks like today.





And this is what it will look like in 2050.

Notice how top-heavy it becomes? That is because, by 2050, about a fifth the world will be over 60, which is twice the amount it is today.

So yes, our population is ageing rapidly.

If you put that data together with the data I mentioned earlier, we can calculate some numbers:



+



=

26 million US gamers today are  
between 50 and 64 years old.

11 million US gamers today are  
older than 65.

---

37 million US gamers are over 50

29% of US gamers are over 50

(ESA report: 27%)

The PEW and UN numbers combined will tell us that 37 million US gamers or over 50, which is about 29% percent of all US gamers.

That is definitely higher than the 27% the ESA reported, but it is arguably in the same ballpark.

More importantly, this is a lot of people. If this is correct, then there are more 50+ year old US gamers than the entire population of Canada. Wow!

But that's today, let's do a projection and look at the future.

Scenario 1:

The percentages for each age group stay the same.

2015:

37 million US gamers over 50

2025

40 million US gamers over 50

2045

46 million US gamers over 50  
33.1% of US gamers.

So here are two scenarios.

The first is that the percentages for each age group stay the same. So, for example, we know 23% of 65+ years olds play games today, and we assume that this percentage will remain the same in the future.

This scenario leads to 46 million US gamers over 50 by 2045 which is a population that is roughly the size of Spain's, a top 30 country in the world per population. But that doesn't really make sense. Because today's 65+ years olds did not grow up with games the way today's kids did. They were certainly not hooked on e-sports. So what would make more sense is that percentages move up.

Scenario 1:  
The percentages for each age group stay the same.

2015:  
37 million US gamers over 50

2025  
40 million US gamers over 50

2045  
46 million US gamers over 50  
33.1% of US gamers.

Scenario 2:  
People who have been playing keep playing.

2015:  
37 million US gamers over 50

2025  
63 million US gamers over 50

2045  
105 million US gamers over 50  
43.6% of US gamers.

So in scenario 2 we assume that the amount of 30 year olds that are playing today (which is about 60%), keeps playing when they retire.

And that scenario leads to 105 million US gamers over 50 by 2045! In other words, more US Gamers than the today's population of Spain and Italy combined. Or 10 Belgiums for that matter.

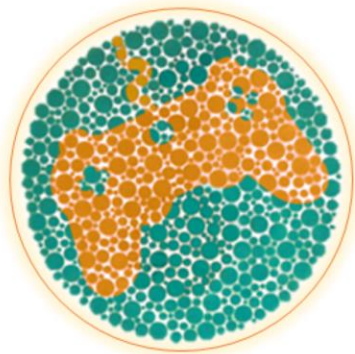
So yeah, when you think about tomorrow's gamers, think about these guys:



Now of course, these are just some fantasy demographics and we need to take a lot more into account.

The second scenario does assume that people over 65 will be physically and mentally capable of playing games, that games will still fit in their lives, and that they will still be interested in playing games.

So that brings me to the main question that I hoping to address in this session. How can we make this happen? How can you as a game designer earn 105 million US gamers over 50?



ACCESSIBILITY



CONTENT

You have to make games that are meaningful to them, and the key to doing that has two parts to it.

First, it's a matter of accessibility. Second, it's a matter of providing great content.

Now this talk is mostly going to be about the latter: content, because that it is what my own work happens to focus on.

But I do want to take 5 minutes to briefly share my two cents regarding accessibility, because it is that important.

So let's explore the following question... Why should you care about accessibility?



Here is why: This could be you. Regardless of how healthy you are right now, there will come a day in which you will face an age-related disability.

One that might prevent you from using a gamepad, from hearing the audio cues, from keeping track of the action on-screen.

Heck, there will be a day when you need help to turn on a console. There is just no way around this.

Or to put it in the words of

"There is a need for creating games that can be played by a more physically challenged, aging segment of the population. I have no doubt that creative game designers will respond in time."

Ralph H. Baer, The Father of the Video Game

Sources:

<http://www.7128.com/articles/collision-course.pdf>

<https://www.flickr.com/photos/skithill/2282067422>



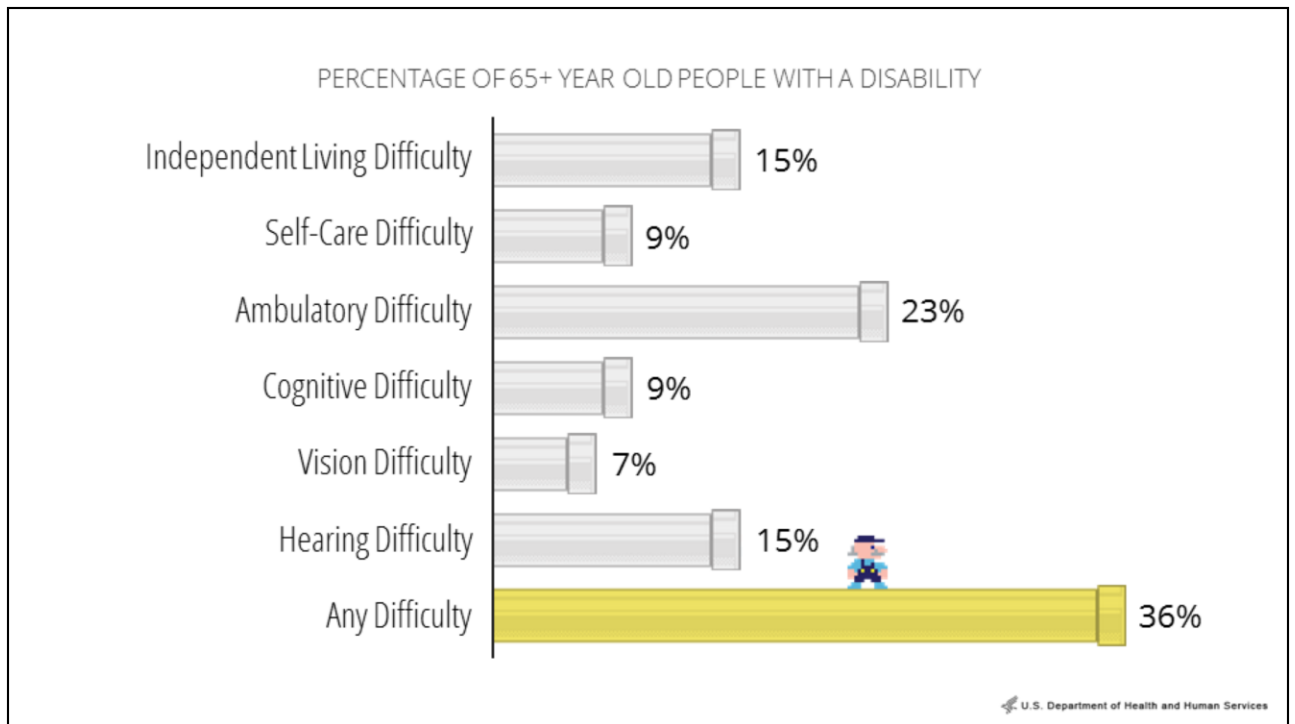
"There is a need for creating games that can be played by a more physically challenged, aging segment of the population."

Because we all want to be able to play games in later life. You, me, and Ralph Baer.

Unless, of course, you don't like to play games. Maybe you're the kind of person who doesn't use her own product. I guess that that is fair, but even then you still want to care about accessibility. Just think about how many people that are out there that are color blind. It's a pretty simple modification to a game, but now you have 30 million more people in the US that can play your game. That's a lot more copies that you can sell.

So what about age-related disabilities then?





This slide pretty much sums it up: 36% of 65+ year olds reported a disability to the 2013 survey of the US Department of Health and Human Services. Today, that percentage would account for 41.3 million people, which is actually a low number. I have seen similar surveys that report up to 50% of 65+ year olds. And of course, these are registered disabilities. You can have reduced sight, movement and hearing that will impact you playing games, without it counting as a disability.

So just let this sink in: How great would it be to increase your audience by 36%? Well, let's talk about what you should do to achieve that.

First of, there is an amazing resource out there for you.



[gameaccessibilityguidelines.com](http://gameaccessibilityguidelines.com)

The IGDA game accessibility special interest group and their excellent website [gameaccessibilityguidelines.com](http://gameaccessibilityguidelines.com). Between these two resources, you will find all the information that you need. Much more than what I could possibly sum up today.

Nevertheless, I am going to give you a brief ready-to-photograph overview slide.

Avoid drag and drop	Repetition is helpful
Recognizable input devices	Lower frequencies
Provide training and practice	Allow for sound calibration
Recognizable gameplay	Adjust words per minute
Color calibration	Configurable input
Emphasize relevant sound	Option to slow down gameplay
Use high contrasts	Include larger fonts option
Indicate when recalling information is necessary	Use stronger haptic feedback
Important objects need to be big	Use sound to reinforce difficult to see events
Include keyboard shortcuts	Provide closed captions

This is a summary of guidelines that the academic community has published through many papers by many authors. Some of these things are obvious; for example, slow down the pace and using larger fonts. Others are less obvious; For example, avoid high frequencies or adjust the amount of words per minute that are said.

Most importantly, I do not think that the implementation of these things cost fortunes, nor do I think that they will often conflict with your design. Which brings me to three specific design recommendations.

Every little bit helps.

Include accessibility from the very beginning of the design process.

Adjust the interface, not the challenge.

First, it is going to be very difficult to do all of these in every game. But every little bit helps. If you make your game accessible to the color blind, you have already helped a huge amount of people.

Second, you want to think about these things from the very beginning of your design process. When you are trying to figure out the implementation of a game mechanic idea you had, that is when you want to consider accessibility.

Finally, while age-related adjustments are necessary, they are often personalized. A lot of the things I mentioned were about providing an option in the game's settings, right? So, I feel that it is fair to say that a lot of it is about adjusting your interface. And that is good. Because you want to adjust the interface but not the challenge. Older adults still want to be challenged in a game, and I have often noticed this in my own research observing them.



I will never forget how a 70+ year old participants of my research destroyed me at Trackmania one day. Now for those of you who are unfamiliar with Trackmania: this is a really difficult stunt driving game. It is all about reaction speeds and spatial awareness, and it is certainly not specifically designed for older adults. But that didn't stop this guy. He played it day after day and he kept practicing until he beat every level.

So always keep that in mind when you are designing for older adults. Accessibility should not interfere with giving them a proper challenge. If the interface allows them to do so, then older adults will persevere and master your game.

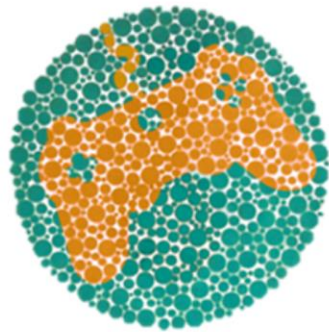
Here is another example:



There are a number of studies on Wii Bowling communities in retirement homes, and they all follow a similar pattern. The first weeks they had a lot of problems because Wii Bowling is not optimized that well. The participants struggled immensely, but they kept practicing. Then they started to get a hang of it, and they got good at it.

And then the benefits came out as well: more social interaction, better general physical health and increased self-esteem. There are plenty of examples like that.

So don't forget to implement a good challenge, because good challenges and interesting gameplay lead to great health outcomes. But enough about accessibility, let's get back to our original question.



ACCESSIBILITY



CONTENT

And let's talk a bit about content. Because we need a little work there as well.

So let's start with a simple question... what content are older adults playing today?

Do we have some stats on that?

Yes, we do.



## GAMER MOTIVATION MODEL



Based on survey data of 144,000+ participants of all ages

Thanks to Nick Yee and the team at [quanticfoundry.com](http://quanticfoundry.com).

You might heard about these guys, as they have been doing a gamer personality survey. It's a short survey with some quick questions about the things that you consider important and enjoyable in a game, and then it will tell you how you are positioned in relation to the six motives that you see on screen now.

Really cool, but the best part of this is that this is very motivating to fill out this survey. They already have more than 144,000 participants, which is quite a sample.

Now, unfortunately, their report on games and older adults is behind a paywall, but I contacted them and they were so kind to let me show you the tip of the iceberg. So let's look at the older adults in their sample, and let's start with platform preferences.





PC

♀ 86%  
♂ 81%



Mobile

♀ 28%  
♂ 32%



Console

♀ 25%  
♂ 21%

PLATFORM PREFERENCES FOR 50+ YEAR OLD PLAYERS

For 50+ year olds, PC is the most popular platform, and tablets, smartphones or non-handheld game consoles are not a bad idea either.

Of course, these images are just there for illustrative purposes: The percentage of Neo Geo players is probably pretty low.



PREFERRED GAMES AND MOTIVATION FOR 50+ YEAR OLD PLAYERS

Here are their preferred games, though.

What do the numbers mean below them? Quantic Foundry compares the prevalence of games to the average. It is not just frequency.

So read it like this: men over 50 are 25.8 times more likely to mention railroad tycoon in the survey than the average player. These come from questions asking them about their top favorite games and recent games they enjoyed playing.

So in general, these findings have a pretty clear message:

1. Older women prefer games that has them collect stars or that allow for self-expression.
2. Older men prefer games with strategy and experimentation/exploration.

And these findings are in line with what academic quantitative research has shown:

The PC is the platform of choice.

Baby Boomers Like Adventure,  
Roleplaying, and Online Games.

Baby Boomers Want an  
Intellectual Challenge and Are  
Less Interested in Reflexes.

Boomers Like Games that  
Provide a Sense of Escape to  
Another World

(n = 300+)



**CELIA PEARCE**

"The Truth About Baby Boomer Gamers"  
Games & Culture 3 (2), 2008

PC is the most popular platform.

80% prefer casual games, 20%  
prefer hardcore games.

Challenge is the most important  
motive, but social interaction  
predicts playing time.

Reported motivation to play is  
much lower than for younger  
audiences.

(n = 214)

**BOB DE SCHUTTER**  
"Never Too Old To Play"  
Games & Culture 6 (2), 2011



In Celia Pearce's study with 300 baby boomers she also found that PC was the platform of choice and there are many parallels behind her findings and the games on the previous slide. It would make a lot of sense for her players to play Second Life (online, escape, adventure, roleplaying), Glitch (online, escape, adventure, roleplaying), Railroad Tycoon (intellectual challenge, roleplaying), and even Farmville (online) and Solitaire (challenge).

I did a survey study like it as well with 214 people, and again, PC beats the other platforms. We also found some other things as well, but the final line is actually the most important one of them all.



## OLDER ADULTS ARE LESS MOTIVATED TO PLAY GAMES

The research shows that older adults are less motivated to play games. And that is not just my research. Quantic Foundry's study with more than 100,000 people noticed the same thing. So why would that be?

This is a tough question for quantitative survey-based research to answer, so let's look at some qualitative studies in which researchers talked to older adults about why they play games.

I have plenty of stories from my own, but to avoid any research bias here, I am going to go with a quote from Celia Pearce's paper.



*"There is one thing on which most Baby Boomer Gamers agree, regardless of their gaming preferences: **the lack of attention by the mainstream game industry to their interests.***

*Although some players had positive things to say about publishers' offerings, a greater majority felt that video games were too **formulaic, derivative, with too much emphasis on graphics and not enough on innovation.**"*

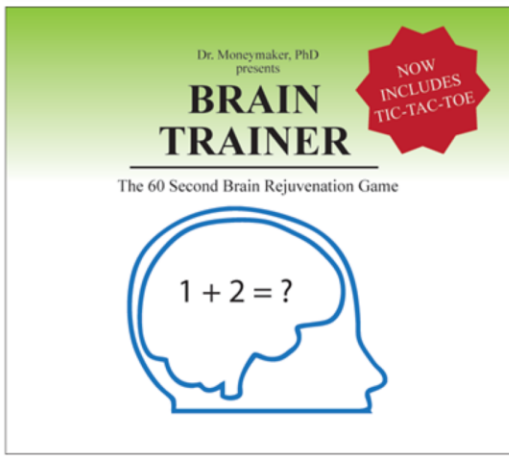
CELIA PEARCE

"The Truth About Baby Boomer Gamers"  
Games & Culture 3 (2), 2008

Older adults feel left out. Even the ones that love to play games.

And I would argue that it has a lot to do with content issues. At least, that's what the older players in my research say, as well as players in studies that I have not been a part of.

Which brings me to the second point. It's time to talk ageism. Because if you think about games for older adults, what comes to mind?



Brain training games and embodied fitness games.

And that is just sad.

First of all, because of this.



## A Consensus on the Brain Training Industry from the Scientific Community

FOLLOW THE DISCUSSION

We object to the claim that brain games offer consumers a scientifically grounded avenue to reduce or reverse cognitive decline when **there is no compelling scientific evidence to date** that they do.

...tend to overemphasize or highlight the benefits and overstate potential advantages of their products. In the brain-game market, however, advertisements also assure consumers that claims and promises are based on solid scientific evidence, as the games are "designed by neuroscientists" at top universities and research centers. These claims are reinforced through paid advertising and distributed by trusted news sources. Thus, a group of cognitive scientists and neuroscientists felt obliged to issue a direct statement to the public: The strong consensus of this

...times, Criticism From Others

The Chronicle of Higher Education - October 22, 2014

Scientific evidence does not support the brain game claims, Stanford scholars say  
Stanford Report - October 20, 2014

<http://longevity3.stanford.edu/blog/2014/10/15/the-consensus-on-the-brain-training-industry-from-the-scientific-community-2/>

This is the consensus of the scientific community on brain training games. We have no compelling evidence that they actually work. And this is signed by a lot of extremely well-respected names in this field. Many of which would directly benefit if we did have the evidence, as their skill set as psychologists and neuroscientists would be worth a lot of consultancy money.

Of course, brain games have been successful at selling copies, but then again, scared people will buy anything. In my research I talked to many older adults who were disillusioned by brain games as there is no clear effect and the games themselves are not very fun. That is probably why none of the health games are in any of the quantitative studies I just mentioned.

Anyhow, regardless of their effectiveness,



Both the brain training and health games are pushing some pretty messed-up rhetoric.

After all, the message that you are putting out is that older adults should care about being young again. Because after all, you are worthless to society if you are not young anymore. And that is beyond messed up. Think about it. How would you feel if every game that is made for you stereotypes you and pushes forth these artificial ideals? How awful would that be?

Oh wait, I guess every female gamer in the audience knows exactly what I am talking about. Therefore, to me, health games for older adults that are only about external outcomes fall in a similar category as pink games.

But anyway, let's look at it from a positive angle. How can we move passed this?





We need to design games that are truly fun to play for older adults. We need meaningful play experiences, not gamified training exercises.

Play is about happiness, positive psychology, self-cultivation and having fun. There are senior playgrounds being built all over the world. That is the mindset that we as digital game designers need to incorporate.

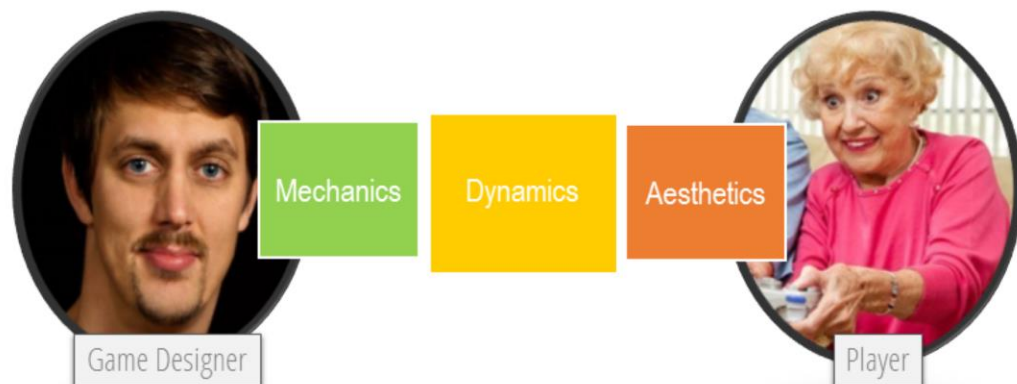
We all know how important play is when children grow up. Well, it is just as important when you grow old. If you really need an ulterior motive to play, then you're doing it wrong.

So let's talk design recommendations for content.

Use Geronto-Aesthetics  
to appeal to older adults.

First, use Geronto-Aesthetics that appeal to older adults.

What is that all about?



ROBIN HUNICKE, MARC LEBLANC, ROBERT ZUBEK  
"MDA: A Formal Approach to Game Design and Game Research"  
From <http://www.zubek.net/robert/publications/MDA.pdf>

Well, geronto refers to old age, and "Aesthetics" is a term borrowed from Robin Hunicke, Marc Leblanc and Robert Zubek. They are the authors of the MDA framework that is taught at the game design workshop that happens Monday and Tuesday at this conference. It stands for Mechanics, Dynamics, Aesthetics.

Now for those of you who are unfamiliar with this: Aesthetics are the intended emotional experiences that we look for in game design. That is why it is pictured closer to the player than to the designer. The player is in control of their emotional experiences, of the aesthetics.

However, as a designer you want to envision these experiences at the beginning of your design process, and then you want to try to create mechanics that will result into them. For example, you might want the player to feel challenged, so you could end up designing some clever puzzle mechanics to make that happen.

# AESTHETICS

sensation  
fantasy  
narrative  
challenge  
fellowship  
discovery  
expression  
submission

...

Now, the authors of MDA provide a list of aesthetics.  
Experiences such as:

Sensation.. the player's sense are stimulated by the game

Fantasy.. The player indulges herself into a fantasy world

Narrative... the player relates to an awesome story and cool characters

Challenge... the player is overcoming interesting conflicts

And so on...

These are great, but they are focused on a general audience.  
That's where geronto-aesthetics come into play. They are an expansion to include older adults' needs and wishes, and there are six of them.

# GERONTO-AESTHETICS

## cultivation

games as  
personal growth

## compensation

games to replace  
unavailable activities

## contribution

games as a way of giving  
back to others

## contemporaneity

games as keeping up  
with the times

## connectedness

games as a shared activity  
with cherished people

## nostalgia

games as a conduit  
to the past

BOB DE SCHUTTER

"The Promise of Gerontoludic Design"  
Gerontechnology 13 (2), 2014

Cultivation or playing games for personal growth, e.g., I play Rome Total War to learn more about ancient warfare.

Contribution or playing games to give back to society, e.g., I help out new clan members online in Everquest.

Connectedness or playing games as a shared activity, e.g., my son and I love to play Hearthstone together.

Compensation or playing games to replace unavailable activities; e.g., I play FIFA because I can no longer play real-life soccer

Contemporaneity or playing games to keep up with the times; e.g., I play a virtual reality game because it is so cutting edge

Nostalgia or playing games as a conduit to the past; e.g., I play a game about WW2 because I was a little boy or girl during it.

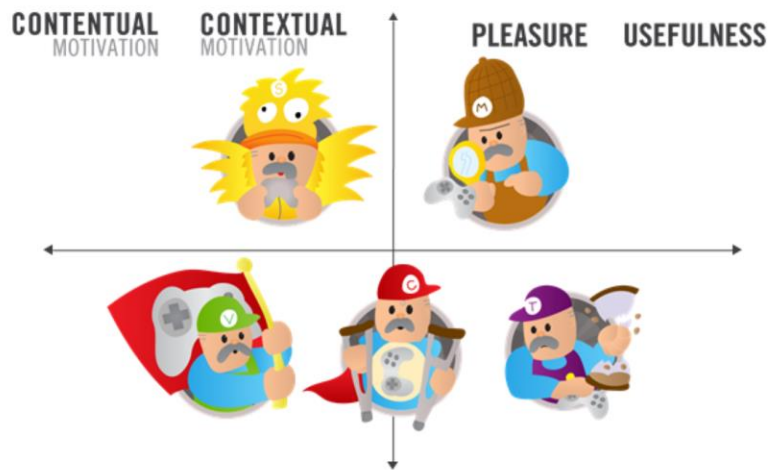
All of these will help your game to appeal to older adults, and unintentionally, they all have positive outcomes for them. For example, nostalgia is all about reminiscing which has been demonstrated to have significant health benefits.

A large orange rectangle with a thin black border, centered on the page.

Assess the  
context of play

Next up, we have “Design for Context”.

Because context has a huge impact on how older adults play.  
Let me show you a player classification that we developed for  
them.



BOB DE SCHUTTER & STEVEN MALLIET  
 "The Older Player of Digital Games"  
 Communications 39 (1), 2014

Through qualitative research we identified 5 different types of older adults, based on

How they are motivated by the content of games, which is referred to as contentual motivation.

How they are motivated by the context in which games are played, which is referred to as contextual motivation.

And the extent to which they emphasize pleasure or usefulness when they choose games to play.

Let's start in the bottom right corner.



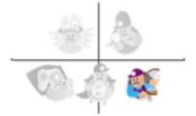
## TIME WASTERS

"I generally play when I have absolutely nothing else to do. When my husband will be out of the house until late in the evening, for example. Working on my PC, reading, gardening, all those things have priority over playing games."

Elisabeth (62 years old, female)

PLAYS FOR CONTEXTUAL REASONS | WANTS GAMES TO BE USEFUL

Favorite Game:  
Sudoku



Time wasters play because there is temporarily nothing better to do. They might be waiting for their son or daughter to come online to chat, so they play a quick puzzle game that they turn off again whenever they like. As a result, they play because they need some quick diversion from boredom, which is a contextual motivation.

However, they are serious people and they want to spend their time as useful as possible. God forbid that they would do something unproductive. So they end up playing puzzle games or adaptations of traditional games. In particular, card games or Sudokus are popular as they feel that those are very beneficial for them cognitively.

They have not a lot of understanding of gaming culture, so they tend to get stuck in that category.





## FREEDOM FIGHTERS

"I have always dreamed of the day that I would be the one who decides when I get up. Not the alarm clock, not a boss, just me. And then I want to do whatever I feel like. Those games I play are part of that dream."

Anna (57 years old, female)

PLAYS FOR CONTEXTUAL REASONS | WANTS GAMES TO BE FUN

Favorite Game:  
Plants vs. Zombies



Freedom Fighters play in function of freedom of choice, autonomy, relaxation and living life at one's own pace. You've worked for a boss all your life, and you could not get out of bed whenever you wanted, but now you are retired. You are in charge now, you are ready to have some fun playing games now.

These older adults play are playing for contextual reasons as well, as they play to get away from other activities. They could not care less about what society thinks about their hobbies; they just want to have a good time. And it shows in the games that they choose, as it is all about instant gratifications. If not, they will switch to something else. These are your Popcap fanatics who love casual games like Bejeweled or Plants vs Zombies



## COMPENSATORS

"I'm home alone a lot. I see very few people each day and to be honest, I'm not the type of person who enjoys to be alone. That's why those games are so important to me. I play all the time, literally. It really is a kind of therapy."

Georgette (66 years old, female)

PLAYS FOR CONTEXTUAL REASONS | MIX OF PLEASURE AND USEFULNESS

Favorite Game:  
Second Life



Then we get to the group in the middle, the compensators.

They are similar to time wasters as they are playing because there is nothing else to do, but they differ from time wasters because their lack of other activities is permanent. They might have a disability that prevents them from getting out of the house, or they are just scared of the outside world, and as a result they are stuck at home with a lot of unstructured time. Every single day.

Their primary motive is contextually oriented as there is a lack of other activities, but their stance towards pleasure and usefulness is a bit complicated. On the one hand, games are useful because they get social interaction and a hobby through them. On the other hand, games are also the only fun that they have in an average day. And there is no way to verify what matters more.

So what do they play? Games that provide a lot of social interaction, as they do not get to meet a lot of people in real life. As a result, you see games from online casual games with chatrooms, but also Second Life and MMORPGS.



## VALUE SEEKERS

"Playing games is like everything else in my life. I have always been eager to acquire knowledge or skill. Learning about the things that carry my interest has always been a major drive in my life."

Roger (72 years old, male)

PLAYS FOR SPECIFIC CONTENT | WANTS GAMES TO BE USEFUL

Favorite Game:  
Civilization V



Value seekers play in function of learning and cultural relevance. For this group, games are just another gateway into a bigger interest of them.

As a result, the play for the content of the game, and this content happens to be very meaningful to them. However, they do care more about the game being useful or meaningful, than that the games is very pleasurable. After all, it is all about self-cultivation to this group. And the games that they play reflect this. There are war games, historical simulations, flight simulators, etc. The Civilization series suits them well.



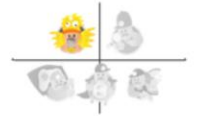
## LU DOPHILES

"I have always played everything I could find. Cards, snooker, pinball, air hockey, you name it. Playing games is part of who I am."

Jacques (51 years old, male)

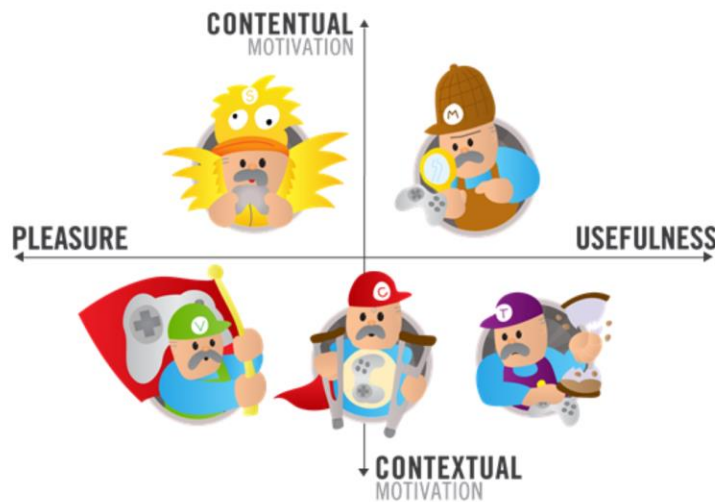
PLAYS FOR SPECIFIC CONTENT | WANTS GAMES TO BE FUN

Favorite Game:  
The Secret World



Finally, for ludophiles, digital games are part of a passion for playing games in general. These respondents absolutely love to play and they play everything, even book a last-minute flight is a game to them.

As a result, their primary motive is contentual and they just want games that they find pleasurable to play. Their favorite games are extremely varied, as this group will play absolutely everything that looks fun. You will also find them playing more niche titles, such as The Secret World.



BOB DE SCHUTTER & STEVEN MALLIET  
 "The Older Player of Digital Games"  
 Communications 39 (1), 2014

And that brings us back to the overview.

I do not have percentages to stick on these, but the time wasters are currently the largest group.

However, as more and more people who grew up with games grow older, the other groups are gaining them rapidly.

I hope that this illustrates how we need to think beyond "a single type of older player" as it is a myth, but more importantly: I am bringing this to your attention to show you how important the context of play is to older adults. The context of time waster is very different from a freedom fighter, and you want to take this into account when you design for them.

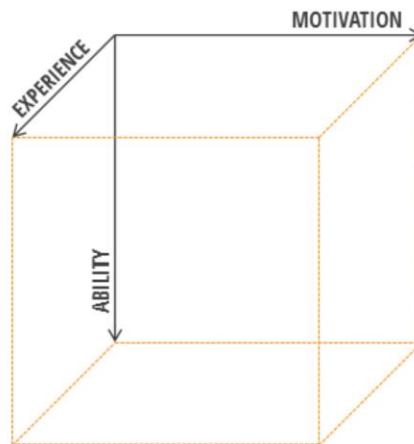
And whenever I say context, that does not just mean someone's current context.

## Design for a rich life history

You have take people's life-span into account as well.

Older adults have different past experiences and these influence how they will look at your game.

Let me illustrate that with a quick detour into gerontology.

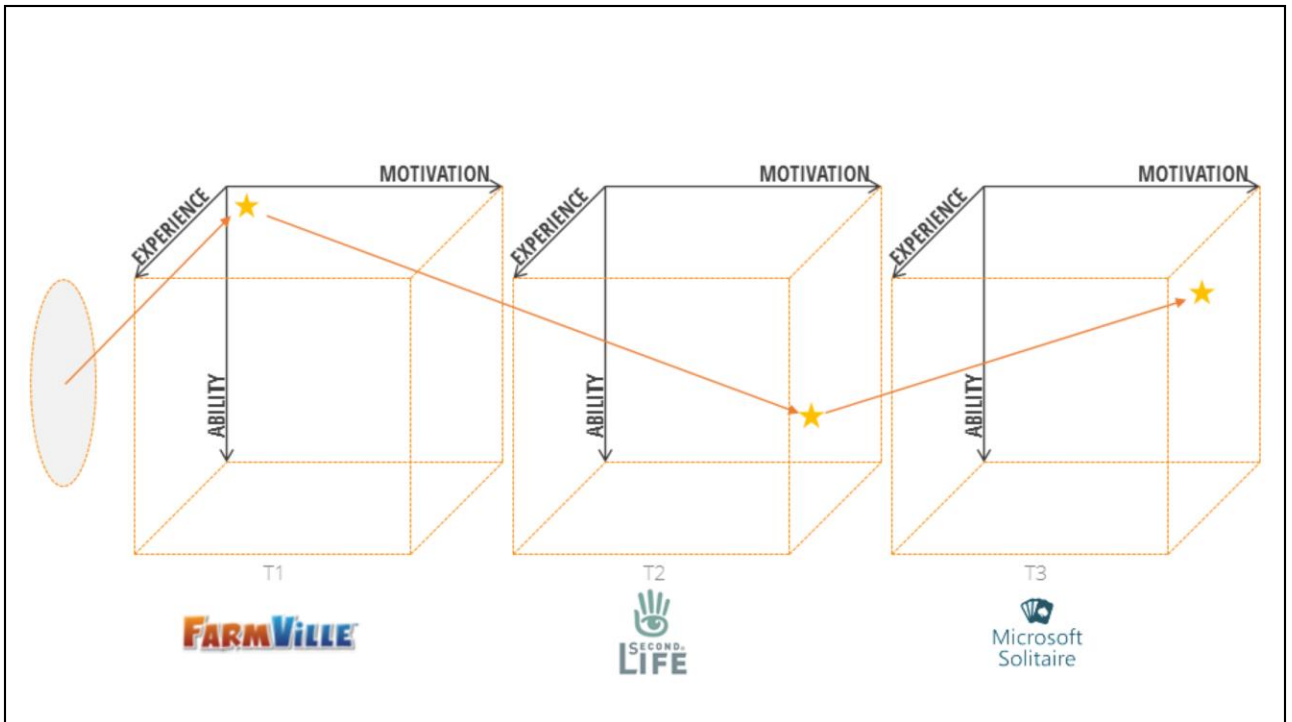


**JULIE BROWN**

"A Life Course Model for Older Adult Digital Gaming"  
From [http://uknowledge.uky.edu/gerontol\\_etds/6](http://uknowledge.uky.edu/gerontol_etds/6), 2014

This is a study by Julie Brown. Based on her interviews with 50+ year olds, she developed a life course theory of digital gaming. And it goes a little something like this.

She noted that older adults have different motivations for playing games, which is something we just talked a lot about. However, motivation is just one part of the story here. A second dimension that matters a lot for older adults is ability to play. Which is to some extent about accessibility, but also about having enough time and money to play. This is where we start to diverge from general audiences, as younger players typically do not have a lot of problems playing games. So now we have an X and a Y axis, but the model also has a Z axis, which stands for experience. Julie typically uses it as a measure of experience that people have with playing games, but I prefer to look at it even bigger and define it as life experience. Now this is where there is a huge disconnect with younger generations, because older adults have a lot more experience in life. So as designers, we have to keep tabs on all three of these domains, as opposed to focusing mostly on motivation.



People can be at different points of the box at different times of their lives. The person in box 1 found out about games on Facebook because of her friends. She doesn't have a lot experience, ability or motivation to play yet, but she likes Farmville because of the room for creativity it offers. Her motivation for creative games goes up, so she looks for more games and gets into Second Life which offers more possibilities for creative play. Box 2 represents her 5 years later with more experience playing games, better ability and higher motivation. She has made a lot of friends on Second Life as well. However, a few years later, her husband gets a severe medical condition and her time to play - her ability to play - therefore gets limited severely. The people she hangs out with are no longer online when she can play and her interest in Second Life drops. She still likes to play games, though, but now she limits herself to card games. So what this tells us is to keep in mind that older adults have full and rich lives. And to be aware of past experiences as they can help generate interest into new ones.





Provide “mature” content.

So older adults have led rich lives and because of that they crave games for grow-ups; they want mature content.

And by that I do not mean this...



This is not what older adults want.

In fact, I think we can make this list a lot better. Let's do it together, GDC.



Let's say instead of intense violence, we have innovative gameplay. Sexual themes becomes thought-provoking themes. Strong language becomes meaningful dialogue. Blood and gore becomes aesthetic experiences. Are we happy with this, GDC? Of course, for some 14 year olds, great innovative gameplay might be the same as intense violence, but that is definitely not the case for your average adult. And while we have a lot of great power fantasies, the vast majority of games struggle immensely at dealing with anything that is genuinely mature. Just think about how the theme of loss and grief is dealt with in your average first person shooter. So anyway, on average, you will find that older adults prefer soft and smart content over fast and aggressive. Content And this is also true for general media preferences such as TV.

Two comments, though. First a pro design tip: innovation and meaningfulness is subjective. What might seem to be a dumb casual game to you as an expert gamer, can be very innovative and clever for a time wasting or freedom fighting older adult.



Second, I am not saying that we do not have such games already. I would argue that we have many games that do this already. In particular indie games.

I have tried Papers Please on some older adults and it went very well. Why wouldn't it? It's a great puzzle game embedded in a social realist novel. Innovative gameplay, meaningful dialogue, thought-provoking, beautiful pixel art.

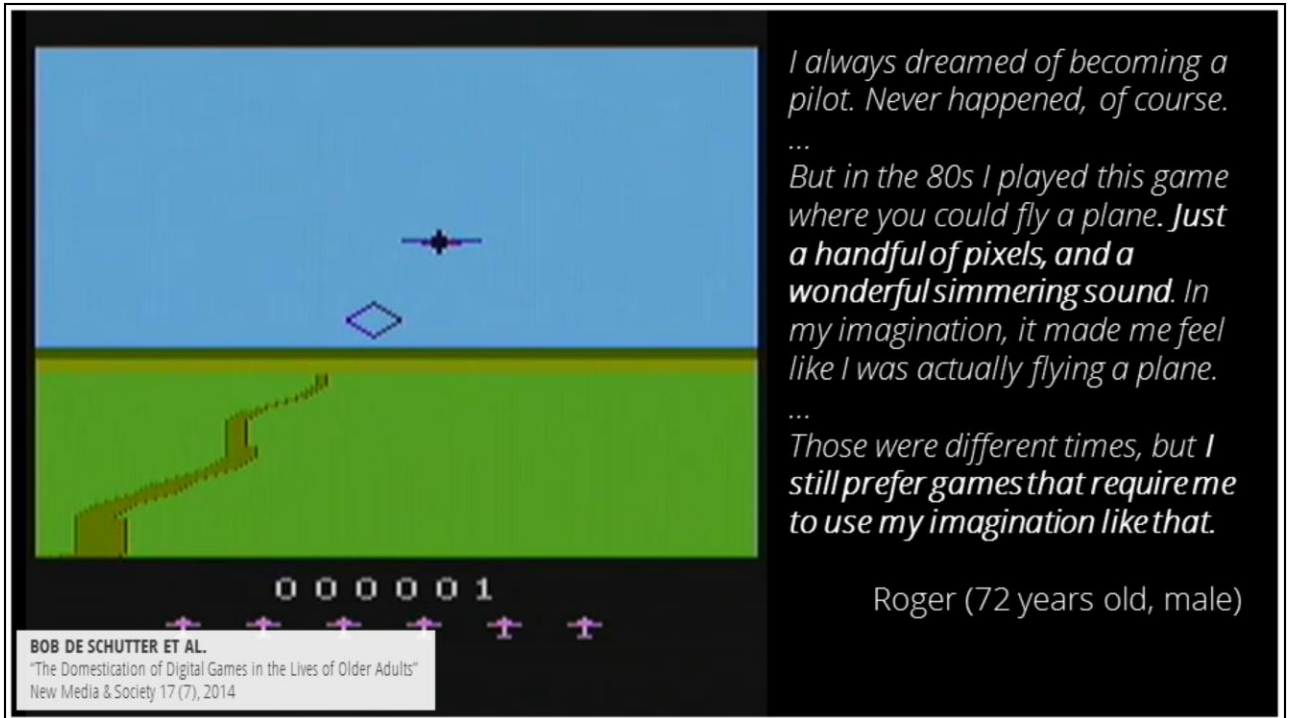
And that is a key point, really. I think that we need to curate and market these indie games to older adults. It's such a great fit, and it might help some indie developers to survive the sales slump that many indie games seem to be in right now. Which brings me to another really exciting point.

## Imagination Matters.

Imagination matters. Multiple studies have found that older adults do not care about graphics as much. They care about the fantasy more than the visualization.

Which makes sense if you grew reading books, you need your imagination or its just words on paper. And if you played video games back in the early days. Let's just give you a proper example here.

Anybody remember Spitfire Attack for the Atari 2600?



This is a quote from one of the participants in my research.

First paragraph: It is meaningful to him.

Second: An aesthetic experience.

Third: Imagination trumps graphics.

It really does all of the things I just mentioned and that is why Roger remembers it so fondly.

Here is another quote.



*I never buy the latest games. I do not want to spend more than \$25, but I also do not like them that much. They are often too detailed, and that gets in the way of your imagination. It takes away from the experience.*

*Francis (71 years old, male)*

**BOB DE SCHUTTER ET AL.**

"The Domestication of Digital Games in the Lives of Older Adults"  
New Media & Society 17 (7), 2014

This one comes from Francis, a huge Age of Empires II fan.

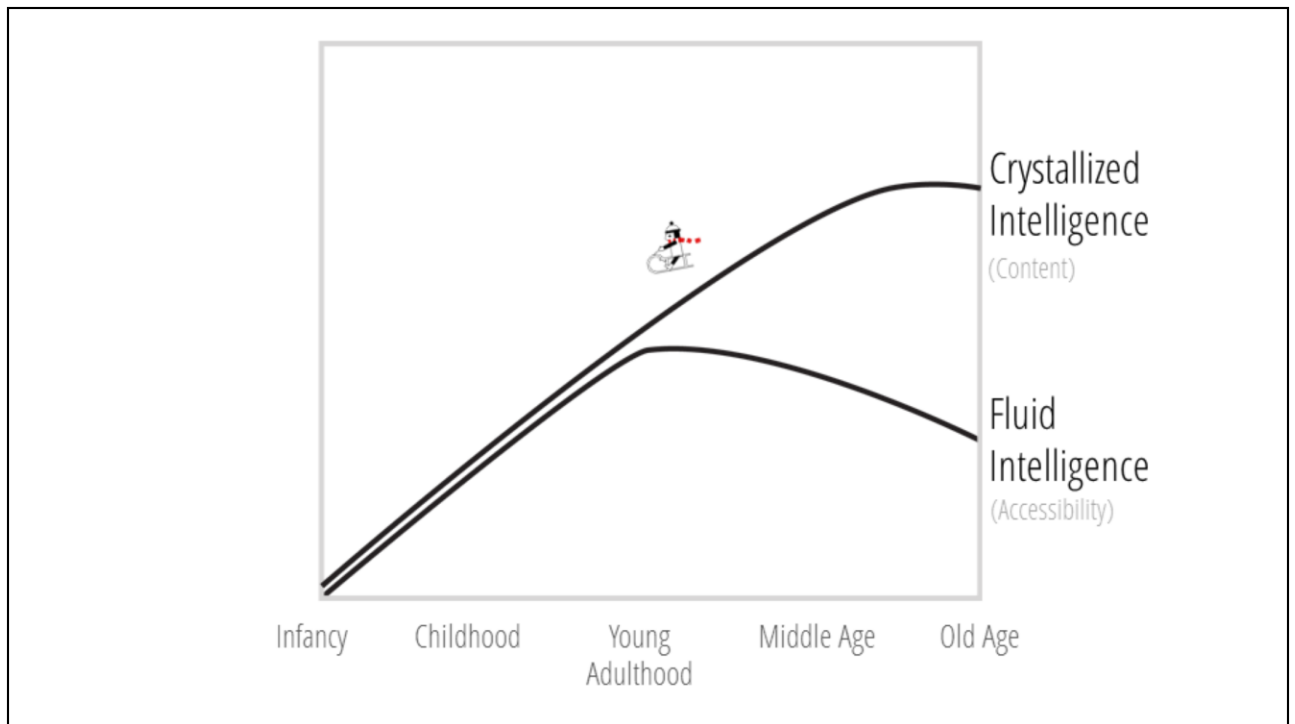
You do not necessarily have to have very expensive and very realistic graphics. Especially when games can tie into bigger interests and life history, which brings me to another recommendation:

## Design for crystalized intelligence

Design for crystallized intelligence.

What does that mean? Well, there are two kinds of intelligence that matter for this topic.

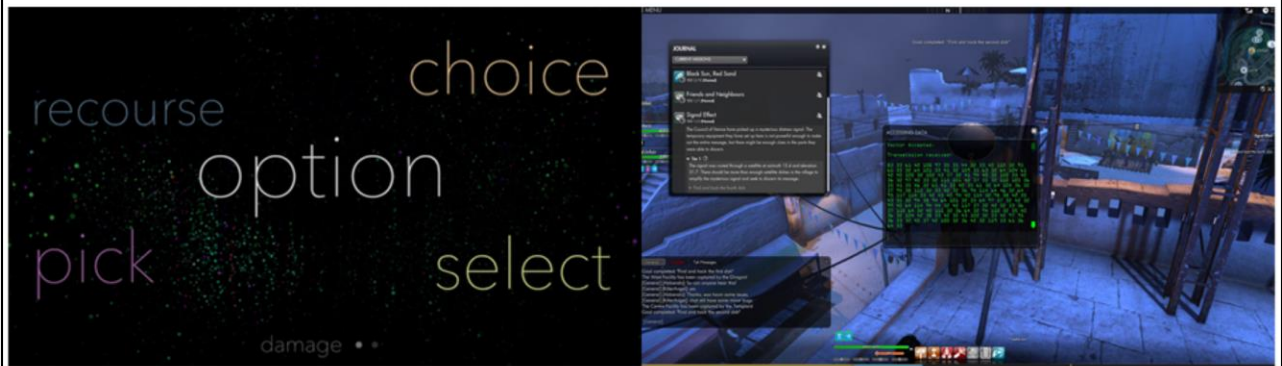




There is fluid intelligence, those are all the kinds of intelligence that are independent of your past. Things like reaction speeds, pattern recognition, abstract reasoning, problem solving, etc. Research shows that these peak in young adulthood and then decline, like this...

Then there is crystallized intelligence, the kinds of intelligence that do rely on your past. Things like vocabulary, reading comprehension, the application of skills and knowledge to solve problems. Research shows that these skills peak in old age.

So while it is important as a game designer to provide accessibility accommodations for a decline in fluid skills. You could also look at it in a different light and try to design for crystallized intelligence.



Synonymy

The Secret World

Of course, there are games that already do a good job at this. Synonymy is a brilliant word game that challenges your vocabulary by having you find the shortest distance between two words based on their synonyms. The Secret World is an MMORPG that offers investigation missions that require prior knowledge to complete, and that have nothing to do with the hack n slash gameplay. And other games come to mind as well, how about Her Story or Alphabear?

So there are games that require the use of crystallized intelligence, but we could definitely use more of them. Also, this doesn't mean that you cannot use some fluid intelligence. Remember the Trackmania guy earlier? Fluid intelligence within games can definitely be trained. It's just that most games out there are all about fluid intelligence and less about crystallized intelligence. At least, crystallized intelligence that has nothing to do with video game culture and history.

Help older adults to find  
the “right” player.

Now let's move on to multiplayer. When it comes to social play, the most important guideline is this:

Help them to find the right players to play with. Of course, this is also true for younger audiences, but even more so for older adults. I'll illustrate this with a few quotes.



*"I finally found a proper guild and it is such a relief. They speak my language and no longer do I have to play with those obnoxious teenagers. Those teens are so pumped up, and they are constantly cursing and fighting amongst themselves."*

Robert (56 years old, male)

BOB DE SCHUTTER ET AL.

"The Domestication of Digital Games in the Lives of Older Adults"  
New Media & Society 17 (7), 2014

Older adults want adults to play with. They are simply turned off by pubescent gamer behavior. In fact, one of my participants, not Robert, who also was in a guild, specifically sought out obnoxious teenagers to defeat. So maturity matters for older adults who play online.

And there are other factors in that quote as well...

Language... localization is an important factor in finding the right playing partner.

And of course, skill. It's more fun if you are both at a similar skill level.

For women players, there is another familiar story...



*"I have played with a lot of people, not just with women. I don't chat a lot with men though. **Men tend to make lewd suggestions, once they think that they can get more from me than just playing a game with them.**"*

Bernadette (62 years old, female)



BOB DE SCHUTTER ET AL.

"The Domestication of Digital Games in the Lives of Older Adults"  
New Media & Society 17 (7), 2014

Harrassing women is unfortunately something of all ages.  
Maturity is not always the same as your age. Anyway, here is  
my final recommendation...

## Design for intergenerational (and other social forms of) play

Of all the benefits that games have for older adults, intergenerational and social play are the top ones in my opinion.



I worked on a Nintendo Wii game myself that was all about intergenerational play and it was amazing.

Seeing two generations collaborate and compete is an amazing feeling as a designer. It is very hard to pull off, but when done right it is extremely powerful. And very few companies make games that focus on this form of play.

So you want older adults to be able to play with their younger family members.





And a simple but effective way to facilitate this is called vicarious play. One player does the controls, the other helps to think and solve puzzles. Adventure games like *Day of the Tentacle* are very suitable for this, and I had more than a few participants in my research who played adventure games together with their children this way. They let the younger person do the controls, while they help with the puzzles. And when the younger person is a small child, they do it the other way around.

However, while this is a popular way to play, very few games actually implement this in their game design. Maybe *Mario Galaxy* with their star-collecting second WiiMote, but it is certainly rare to find it as a design feature. So try to incorporate this in your game design, as playing with their children or grandchildren is a powerful motivator for older adults. In fact, "Video game adoption" as we call the process of starting to play games, is often a result of intergenerational processes. Of younger generations introducing older adults to a game.





Anyway, that's all for now, folks.

While this was just the tip of the ice berg, but I think that this was a great starting point.

So here are my ending comments.

## AGE OF GAME DEVELOPERS (2014)

Over 50	1%
40-50	16%
30-39	44%
25-29	25%
Under 25	14%



This needs to change. If you want to address this target demographic, you need more 50+ year game developers. So do something about this.

Second, I want to highlight two initiatives that I think are awesome.

## Social Connection Gamejam

- AARP/ESA with HEVGA schools
- Held 4/1 – 4/3 2016
- Registration starts 3/19/16
- \$10,000 Grand Prize for winner of E3 Live Pitch
- \$1500 per each semi-finalist team member to fund travel to E3.
- \$25 per diem post-submission for each team member.

AARP contact:  
Michael Hughes [mhughes@aarp.org](mailto:mhughes@aarp.org)



The poster for the Social Connection GameJam features a blue background with a grid pattern. At the top, it says "#DisruptAging" and "Social Connection" in yellow. The title "GAMEJAM" is in large, bold, yellow letters. Below the title, it says "Got a game idea? It could earn you a trip to the annual E3 Expo and a chance to win \$10,000...". A red horizontal line separates this from the next section, "Ready for a challenge?", which is in white. Below this, it says "Design a PC or mobile game with the power to connect people age 50 and over. Teams with the best ideas will have the chance to pitch them at the annual E3 Expo in Los Angeles." and "Each team member (max. 3) will receive \$1,500 to fund their travel." Another red horizontal line separates this from the next section, "Win the pitch? Win \$10,000!", which is in white. Below this, it says "Registration Starts: 3/19/16 @ 12am EST" and "Registration Ends: 4/1/16 @ 4:59 pm EST" in yellow. A final red horizontal line separates this from the bottom section, "To register, visit:", which is in white, followed by the website "www.socialgamejam.com" in white. At the very bottom, there is small text: "The AARP/ESA Social Connection GameJam is made possible through the generous support of the Higher Education Video Game Alliance (HEVGA)." and a logo for HEVGA.

The AARP, the association for retired people with millions of members, HEVGA, the higher education videogame alliance, and ESA, the entertainment software association, are doing a national game jam for students in which they will design games about social connectedness among older adults.

They have awesome prizes, and this is just very exciting stuff overall!

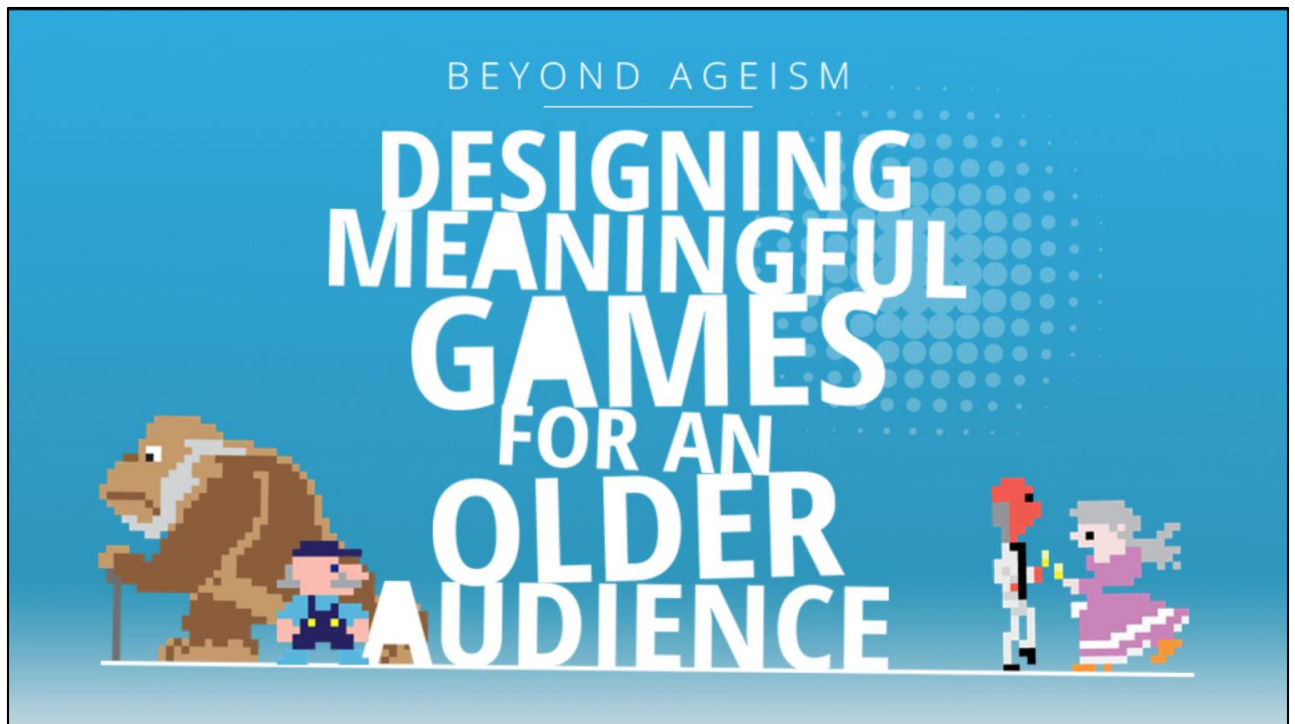


A professional society for people who study or make games for older adults.

[www.gerontoludicsociety.com](http://www.gerontoludicsociety.com)

Next, the Gerontoludic Society is an association for people who design and study games. Right now it is mostly academics but we would love to have industry people to be a part of the dialogue. And if that doesn't do it for you, this is a group of people who have access to older adults that can playtest your game.

And finally...



I have one personal note.

Even though I have been pretty critical at times in this presentation, I think that there are some really amazing games out there. I am a big fan of everyone who works in this industry, even if you develop brain training games. I honestly think that games really have never been as awesome as they have been today. I so often wish that I have had all these cool games and game engines when I grew up.

So with that in mind, it is not surprising that there actually are a lot of amazing games out there. That fit the ideas that I talked about in this session. Nonetheless, I hope that I have been able to demonstrate today, that the design space of games for older adults offers many more challenges and many opportunities

And I invite you to explore it further with me.  
By making some meaningful games for older adults.

Thank you so much, GDC!

## Beyond Ageism: Designing Meaningful Games For An Older Audience

*(or how to get 100+ million US people over 50 to play games by 2045.)*

- Every accessibility feature helps.
- Include accessibility from the very beginning of your design process.
- Adjust the interface, not the challenge.
- Use geronto-aesthetics to improve your game designs.
- Assess the context of play.
- Provide mature content that is not sexual or violent.
- Imagination matters.
- Design for crystallized intelligence.
- Help older players to find the “right” player.
- Design for intergenerational (and other social forms of) play.

[www.bobdeschutter.be](http://www.bobdeschutter.be)  
@bobdeschutter

[www.gerontoludicsociety.com](http://www.gerontoludicsociety.com)  
@gerontoludic

Here is an easy-to photograph summary slide.