P.I.0.5 Simple Hybrid Paradox Example.
‘The siege’ and how is related to TPI

English/Español

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Abstract English

This series of documents do not intend to go beyond presenting mathematical facts. Uncommon due to their nature and origin, but facts nonetheless. There is abundant and frustrating evidence about how they cause very strange and virulent reactions, not precisely because they are wrong. The same point that triggers a virulent reaction of denial in one person, others consider it something trivial and obvious. These are not personal opinions of the writer of this document. There are numerous anecdotes that could be told, but it is better to experience it to become aware. It is strange, but that process of awareness is part of the proof. Logical phenomena that are not believed until they are observed for the first time. And suffered.

The first quick reading of the reduced case that is going to be proposed has been proven to provoke angry reactions. But it is that same reaction that prevents the observation of very simple issues that are in plain sight. A double reading is requested, even if it is only of the first non-introductory chapter, and not leaving it halfway, in order to be able to verify for ourselves how it happens.

This document is added, in position I.0.5, to the series of equivalences proposed in:
'Presentation of the Unlimited Transference of Pairs Method: an Alternative to Bijections'[1]
In its last chapter.

The points that will be addressed are:

1) Presentation of the reduced example of a hybrid paradox and its deactivation through a logical 'siege'. An example that creates a small crack in the proof of Cantor's Theorem. If there is one case, will there be more? Obviously, the siege will be more complex for the entirety of $P(\mathbb{N})$. Hence the need for several documents and a long exposition. Despite being reduced and very simple, important issues can already be observed, which are expected to serve as an invitation to make the effort to read the entire series.

2) Explain, in an introductory chapter, the reason for the need to add this document, and one more at the end, to complement the TPI[2]. The technique of DI[3]. I admit to being stunned to observe how, without knowing it, some people propose DI as the only solid argument to deny TPI. DI was rejected in its day as 'crankery', and TPI was created using that feedback. The curious phenomenon is that they are complementary. One cannot be denied without authorizing the other.

3) An appendix chapter, to record references, comment on reactions to TPI and, since the subject of hybrid paradoxes is raised, to comment on my hypotheses in this regard, to offer clues about ways to expand these works. Optional, only for the curious.

[1] https://vixra.org/abs/2209.0120
[2] Letters in spanish, meaning Unlimited Transfer of Pairs
[3] Inverse Diagonalization: schoolyard fight variant

Abstract Español

Esta serie de documentos no pretenden ir más allá de presentar hechos matemáticos. Poco frecuentes dada su naturaleza y su origen, pero hechos al fin y al cabo. Existe constancia abundante y frustrante sobre como provocan reacciones muy extrañas y virulentas, y no precisamente por ser erróneos. Un mismo punto que dispara en una persona una reacción virulenta de negación, otras lo consideran algo trivial y obvio. No son opiniones personales del escritor de este documento. Existen numerosas anécdotas que se podrían contar, pero es mejor experimentarlo, para tomar consciencia. Es extraño, pero ese proceso de consciencia forma parte de la prueba. Fenómenos lógicos que no se creen hasta que se observan por primera vez. Y se sufren.

La primera lectura rápida del caso reducido que se va a proponer, está comprobado que provoca reacciones airadas. Pero es esa misma reacción la que impide la observación de cuestiones muy simples, que están a simple vista. Se ruega una doble lectura, aunque solo sea del primer capítulo no introductorio, y no dejarlo a medias, para poder comprobar por nosotros mismos como sucede.

Este documento se añade, en la posición I.0.5, a la serie de equivalencias propuesta en:
'Presentation of the Unlimited Transference of Pairs Method: an Alternative to Bijections'[4]
En su último capítulo.

Los puntos que se tratarán serán:

1) Presentación del ejemplo reducido de una paradoja híbrida y su desactivación mediante un 'asedio' lógico. Ejemplo que crea una pequeña grieta en la demostración del Teorema de Cantor. Si existe un caso, ¿existirán más? Obviamente el asedio será más complejo para la totalidad de $P(\mathbb{N})$. De ahí la necesidad de varios documentos y una larga exposición. A pesar de ser reducido y muy simple, ya se podrán empezar a observar cuestiones importantes, que se espera que sirvan como invitación a realizar el esfuerzo de leer la serie entera.

2) Explicar, en un capítulo introductorio, el por qué de la necesidad de añadir este documento, y uno más al final, para complementar la TPI[5]. La técnica de la DI[6]. Admito haberme quedado estupefacto al observar, como sin saberlo, algunas personas proponen la DI como único argumento sólido para poder negar la TPI. La DI en su día fue rechazada como 'crankery', y la TPI fue creada usando ese feedback. Se da el curioso fenómeno que son complementarias. No se puede negar una sin autorizar la otra.

3) Un capítulo apéndice, para dejar constancia de referencias, comentar reacciones a la TPI y ya que se saca el tema de las paradojas híbridas, comentar mis hipótesis al respecto, para ofrecer pistas sobre caminos con los que ampliar estos trabajos. Optativo, solo para curiosos.

[4] https://vixra.org/abs/2209.0120
[5] Transferencia de Pares Ilimitada
[6] Diagonalización Inversa: variante pelea de colegio

Índice general

Capítulos **Página**

Parte I

Part I: English

C.- 1

Introduction

Have you read the abstract? Make sure you have before continuing. People keep telling me they don't understand where I'm going with this. This document was created to respond to the reactions to the TPI... and to give you something that starts to provide data on the hypothesis of the existence of hybrid paradoxes. THIS IS NOT THE COUNTEREXAMPLE. It is just a simple example to encourage you to read a much more complex and lengthy one.

I can't help it, I write a bit disorderly. I don't know how to solve the problem of you thinking that what I show in each document is ALL I have, and if I try to warn you about this, you say I'm disorganized. Not even this series of documents is EVERYTHING I have. The TPI document has 60 pages. I tried to save time with an internet person who couldn't read Spanish, presenting only what is an 'imperfect injection', without examples, and the definition of the TPI. The result was that person did EVERYTHING I beg you not to do in the introduction. I will attach the document that person sent me 'anonymously' in the appendix chapters. You can't see our conversations, where that person clearly talks about 'rotating sets' and indicates that I would be able to see it if I had a formal education that took all these foolishness out of my head. But 'rotating sets' are my own argument in the DI. The one that was denied to me, and so I built the TPI.

Remember that I am NOT a mathematician. Still, I have a letter from a professor[1] saying that him have been unable to find a flaw. If the format or rigor were a REAL flaw, beyond the initial tantrum it may provoke, he would have mentioned it. Well, in fact... he did mentioned it... and still don't consider it a serious flaw. PRECISELY, I am tired of asking for help to be able to write all my material in a more conventional way, and to be able to check it more deeply and expand it. In the absence of resources and qualified people, the only thing left to us is the scientific, philosophical, and moral imperative that truth is more valuable than a lie with a comfortable presentation. At least, in mathematics, I hope. I have gone above and beyond to give my best.

I keep warning that in front of a blackboard it is more enjoyable, because I can skip unnecessary assumptions and adapt, studying and evaluating the direct feedback from each person.

Every idea, every concept, has been defended in forums, and after several feedbacks and corrections, they have been checked and considered correct. Every result as well. Except for the point that forces me to add the

[1] Text in the appendix chapter

DI, the interpretation of infinite intersections, which I considered unnecessary after the concept of 'rotating sets' was shot down. We will see it in future documents, or you may have already started to forge it in your mind, in order to deny the TPI, if you have read the COMPLETE document. I keep saying it but it seems it is not being heard (read carefully): if you DECIDE that the subsets of the partition of the ORIGIN SET in the TPI never even come close to the cardinality of the Domain set, that indicates that you firmly believe that there exists a set different from the empty set, subtracting from Domain X Domain the largest subset (NWSP) possible, or ALL of them (remember they are nested). After having tried it with ALL the disjoint subsets of the Origin set in each relation. Although you will be unable to mention a single element within it. This will lead you to IGNORE the UNDENIABLE final result of emptiness, and to rely on the fact that for each subset we always leave an infinite set of elements from NWSP uncovered. A triad of inseparable decisions, as I have been able to confirm in the reactions of several people. If that "leftover"set exists in some strange way, we can choose one or more elements from it... and that is the basis of DI (which we will see in future documents). In DI, the set with supposed cardinality $\aleph_1$ is the one that has trouble 'eliminating' all of the elements. In DI, we decide to ignore the final empty intersection result, which occurs in the same terms but with the roles reversed, and we only focus on the inability of the set with cardinality $\aleph_1$ to get rid of a simple set with cardinality $\aleph_0$.

If you are not going to bother contacting me to ask me questions, or if you are going to read it quickly, skipping parts[2], etc... please don't even try. YOU ALREADY KNOW that I have flaws as a writer, getting angry about it instead of sending me an email asking me... I don't know how to describe it. Reading it quickly will lead you to come up with real nonsense (too many previous experiences)... One person underlined almost an entire paragraph telling me that a specific property didn't necessarily work on infinite sets. The sentence that was left ununderlined, right at the beginning of the same paragraph, said something like: "...this only applies to sets of finite cardinality". ASK, read with some care and patience, and if you get angry, remember that I have double-checks, experienced people who can't find the mistake and that I have offered to do it in person thousands of times with a blackboard, and they call me arrogant for it. That doubt or perception of error could be resolved in SECONDS, and there are more than two mathematicians who do NOT consider it an error. Especially with the presence of more mathematicians, we could leave arguments from authority aside, since you could see their faces, not mine. I DON'T MIND ANSWERING A MILLION TIMES, I'm the first non-mathematician here. What bothers me is when communication is cut off due to real nonsense. Sometimes with arguments unworthy of a mathematician. Things like saying that a counterexample does not nullify a theorem, since one must explain separately WHY each of the existing proofs fails. Anyway...

This week I was able to check something that was causing me brutal frustration. I didn't think it was such a complex argument to understand, but 'someone' has already confirmed to me that it is correct. Even that person did not understand why I insisted on the question, and repeated several times that it was correct. As always, working with anonymous people in forums, with whom I cannot continue working when communication is cut off, and months go by until I find another person.

The idea is simple, both constructions, if well constructed, would be equivalent to an impossible injective relationship between $P(\mathbb{N})$ and $\mathbb{N}$. Both the TPI (Unlimited Pair Transfer) and the DI (Inverse Diagonalization) need property A, but in complementary ways. A triad of interpretations about the type of infinite intersections presented in the TPI document. Affirming A would consist of:

(A.1): We can ignore the final result of empty. I say ignore because it cannot be denied. In both cases, the infinite intersection has an UNDENIABLE result of empty.

(A.2): There is a set that can be empty or not: the 'rotating set'. We are unable to mention a single element

[2]READ THE ABSTRACT!!

within the set because we know with absolute certainty that EVERY ONE of its elements is eliminated from it, from a concrete and calculable step of the infinite intersection. The fact that we are unable to mention a single element within it, WE ARE ALSO GOING TO IGNORE IT... arguing observation A.3.

(A.3): The 'rotating set', NWSP in the case of the TPI, the Packs[3] of unique naturals in the DI, always has an infinite cardinal in each step, of the infinite terms of the infinite intersection. This is also undeniable. But we decide NOT TO IGNORE THIS, to say that no subset (subsets of the Origin set in the TPI, families of pairs from the Domain in the DI) ever obliges us to empty the objective set (NWSP or The Packs). I have even been told that this is indicative of cardinal superiority. Following that idea, the Packs that are never emptied would indicate that $\mathbb{N}$ has a strictly higher cardinality than $P(\mathbb{N})$. :D.

Negating A would mean:

(NOT_A.1): We cannot deny the final result of empty. This would mark an infimum value[4] for any possible state of NWSP or The Packs, that doesn't even have a single element. Let us not forget that the states of NWSP and The Packs are nested sets that strictly contain each other. WE ARE NOT GOING TO IGNORE THIS.

(NOT_A.2): It is stupid to say that a set has a cardinal greater than 0 and be unable to name a single element within it. Not because we don't know it, but because we are absolutely certain that ALL its elements, at some point, cease to belong to the set. WE ARE NOT GOING TO IGNORE THIS.

(NOT_A.3): WE CAN IGNORE that the set we want to empty has a cardinality of ∞ in each term of the infinite intersection. As I say in the TPI document, both in the concept of limit and in the example of Achilles and the turtle, the idea of a distance that we can always reduce is used. And it is ignored, without any complex or problem, that every ϵ or δ, less than any chosen distance, always differs from the true point under study by an infinite number of points. It is not something 'new' in mathematics.

Even both infinite intersections, in both constructions, have only $\aleph_0$ terms.

I start by saying that it is possible to construct the equivalent of an impossible injective relation according to Cantor's Theorem:
a) For A=true, constructing the DI is possible.
b) For A=false, constructing the TPI is possible.

The interpretation of the infinite intersection can be ambiguous. But for each possible interpretation, there exists an impossible injective relation according to Cantor's Theorem. ONE OF THE TWO MUST BE WELL CONSTRUCTED. Since in both, the only doubtful point is A. Therefore: ONE EXISTS. There is a counterexample to the theorem.

They denied me the DI by saying that the empty set was not an infimum, but it was an EFFECTIVE result. My Packs emptied. It was impossible for me to have even ONE element, per Pack, with which to construct the unique image of each element in the Domain. None survived the infinite process of discarding from the DI (we will see this in another document). It was not possible to construct the injective relation. I didn't have a SINGLE ONE... but of course, if we apply the same idea to NWSP... if NWSP empties out effectively,

[3] It seems silly to remember, but given previous experiences: we will see what the Packs are in future documents

[4] A value that may not belong to the infinite series of values, but NOTHING greater than it is unattainable by the decreasing series of values

that means that WSP is (Domain X Domain): an injective relation by Cantorian definition. If NWSP does not empty, I do not have an injective relation according to TPI (ignoring for now the option of the union of all disjoint subsets of the source set). But if NWSP does not empty, then the Packs don't either, and I would have unique options, within each Pack, to construct an injective relation. It's a dead end: a siege. All possibilities are covered. One cannot be denied without authorizing the other.

Both results are contradictory ONLY if we consider $\aleph_0$ and $\aleph_1$ to be distinct cardinals. Exchanging the cardinal role between two sets with the same infinite cardinal is common. It is possible to construct relations that make one appear greater than the other, and vice versa.

Let's consider the natural numbers ($\mathbb{N}$) and the even numbers ($\mathbb{P}$, chosen letter from its name in Spanish):

$f_1 : \mathbb{P} \longrightarrow \mathbb{N}$
$f_1(p) = \{p, p + 1\}$
**We have two natural numbers for each even number.*

$f_2 : \mathbb{N} \longrightarrow \mathbb{P}$
$f_2(n) = \{n * 10^4, (n * 10^4) + 2, (n * 10^4) + 4, ..., (n * 10^4) + 9998\}$
**We have 5000 even numbers for each natural number.*

The DI and TPI are not contradictory, both can be constructed, PRECISELY, because $\aleph_0$ was ALWAYS equal to $\aleph_1$. That's why the roles of the sets involved in the infinite intersections can be exchanged.

That's why it's necessary to add the DI, to complete the siege. Although I didn't expect it, the truth is that it was rejected as 'crankery' in its day and now it's being used to deny TPI. The simple example we're going to see below is THAT, a simple example. It shows a siege technique, which is to change the definition of ALL possible sets involved, to see that once changed, the problematic set does not generate any problem, being the same set.

In the TPI, applied to $P(\mathbb{N})$ and $\mathbb{N}$, we will replace the subsets of $\mathbb{N}$ with $SNEFs$ and $SNEIs$. This simple change disables Cantor's proof in various ways, one of which is allowing the construction of a TPI. And as I have seen that things are denied without thinking twice, as long as the Theorem remains alive, even falling into circular arguments, where the theorem is used as a premise of the theorem itself... The DI is also necessary, not just the change in the definition of the sets. The TPI is so well constructed that the only possibility for Cantor's Theorem to remain alive is to resort to an old work OF MINE that was considered 'crankery' in its day. Living to see the arguments that two different mathematicians can come up with. Yes, I am disappointed. I warn them, even if they choose that path, and their solution is to cut off communications without facing their own judgments.

I know you're going to get angry at the first glance of the simple example. I've gotten some very strange reactions. From accusing me of having chosen it 'too well', to attacking its simplicity. The first one is that I didn't knew mathematical generalizations could have exceptions. The second one is extremely serious: yes, it's too simple, and statistically, a couple of observations that are equally simple to see are going to be overlooked. So please read it twice... if you stop halfway because of that virulent reaction, remember to finish the first chapter, just the first... and you'll understand what I'm talking about. If you think I can't reproduce the phenomenon for more complex sets, you wouldn't actually have found a flaw, you'd just be taking a step back. I would have already demonstrated to you that the phenomenon is possible in one case... and opened up the question of whether there might be more than one. I understand your time is valuable, but I'm not coming empty-handed: I offer you a little crack in the theorem, simple, but a little crack. I'm telling you I can do it for more complex sets. I have references from a professor. I have mathematicians using my own work to deny ANOTHER one of my works (and vice versa). I have every point of the two constructions checked by, at least, two different people. Unofficially, because everyone's time is valuable, and I'm just a supposed 'crankery'. I HAVE DONE MY WORK. Are you going to do yours as guardians of mathematical knowledge? Even before burying yourselves in more text, I try to offer you things to show that the effort is worth it.

That being said, and with the abstract READ. Let's begin.

C.- 2

The Example

Showing the example, tables and definitions

C.- 3

NONE obvious properties: as I could experiment

Surprisingly this next mathematical facts are not obvious. But they are still FACTS.

Parte II

Parte II: Español

C.- 4

Introducción

Lo que interesa de este documento es mostrar el ejemplo reducido de paradoja híbrida, y explicar la relación complementaria entre la DI y la TPI. Es aceptable saltarse este capítulo de introducción e ir al siguiente para ver el ejemplo reducido si no se tiene curiosidad por la explicación de la necesidad de añadir la DI. Es interesante porque ayuda a entender el fallo de la mayor crítica a la TPI, pero no deja de ser un adelanto de lo que se verá al final de toda la serie.

Tanto la DI como la TPI dependen de la interpretación de intersecciones infinitas muy similares, casi idénticas, en circunstancias y propiedades. Las dos construcciones, si estuviesen bien construidas, serían equivalentes a una relación inyectiva imposible entre $P(\mathbb{N})$ y $\mathbb{N}$. Tanto la TPI como la DI, necesitan la propiedad 'A', pero de formas complementarias. Una triada de interpretaciones.

Afirmar A consistiría en:

(A.1): Podemos ignorar el resultado final de vacío. Digo ignorar porque no se puede negar. En ambos casos la intersección infinita tiene un resultado INNEGABLE de vacío.

(A.2): Hay un conjunto que puede ser vacío o no: el 'conjunto rotativo´. Somos incapaces de mencionar un solo elemento dentro del conjunto, porque sabemos con absoluta seguridad, que CADA UNO de sus elementos es eliminado de él, a partir de un paso concreto y calculable de la intersección infinita. El hecho de no ser capaces de mencionar un solo elemento dentro de él, LO VAMOS A IGNORAR TAMBIÉN... argumentando la observación A.3.

(A.3): El 'conjunto rotativo´es NWSP en el caso de la TPI, y los Packs[1] de naturales únicos en la DI. Siempre tiene un cardinal infinito en cada paso, de los infinitos términos de la intersección infinita. Esto es innegable también. Pero decidimos NO IGNORAR esto, para decir que ningún subconjunto (subconjuntos del conjunto Origen en la TPI, familias de pares del Dominio en la DI) nos obliga jamás a vaciar el conjunto objetivo (NWSP o Los Packs). Algunas personas han llegado a afirmar que eso es indicativo de superioridad cardinal. Siguiendo esa idea, los Packs que nunca se vacían indicarían que $\mathbb{N}$ tiene un cardinal estrictamente superior al de $P(\mathbb{N})$.

Negar A, significaría:

[1]Ya veremos que son los Packs en futuros documentos

(NOT_A.1): No podemos negar el resultado final de vacío. Esto marcaría un valor infimum[2] para todo posible estado de NWSP, o los Packs, que ni siquiera tiene un solo elemento. No olvidemos que los estados de NWSP, y los Packs, son conjuntos anidados que se contienen estrictamente los unos a los otros. NO LO VAMOS A IGNORAR.

(NOT_A.2): Es estúpido decir que un conjunto tiene un cardinal mayor que 0, y ser incapaz de nombrar un sólo elemento dentro de él. No porque lo desconozcamos, sino porque estamos absolutamente seguros que TODOS sus elementos, en algún momento, dejan de pertenecer al conjunto. NO LO VAMOS A IGNORAR.

(NOT_A.3): PODEMOS IGNORAR que el conjunto que queremos vaciar, tenga cardinal ∞ en cada término de la intersección infinita. Como digo en el documento de la TPI, tanto en el concepto de límite, como en el ejemplo de Aquiles y la tortuga, se usa la idea de una distancia que siempre podemos reducir. Y se ignora, sin ningún complejo o problema, que cada ε o δ, menor a cualquier distancia escogida, siempre dista del verdadero punto a estudiar una cantidad infinita de puntos. No es algo 'nuevo´ en matemáticas.

La DI fue rechazada en su día diciendo que el vacío no era un infimum, sino que era un resultado EFECTIVO. Mis Packs se vaciaban. Me resultaba imposible tener UN SOLO elemento, dentro de cada Pack, con el que construir la imagen única de cada elemento del Dominio. No sobrevivía NINGUNO al infinito proceso de descarte de la DI (ya lo veremos en otro documento). No era posible construir la relación inyectiva. No tenía NI UNO SOLO... pero claro, si aplicamos la misma idea a NWSP... si NWSP se vacía de forma efectiva, eso significa que WSP es (Dominio X Dominio): una relación inyectiva por definición cantoriana, o que cumple el Naive CA Theorem[3]. Ahora me dicen que NWSP nunca se vacía. Si NWSP no se vacía, no tengo una relación inyectiva según la TPI (ignorando la opción de la unión de todos los subconjuntos disjuntos del conjunto origen, o que sigue funcionando aún, solo con la cercanía al vacío). Si NWSP no se vacía, los Packs tampoco, y tendría opciones únicas, dentro de cada Pack, para construir una relación inyectiva. Es un callejón sin salida: un asedio. Todas las posibilidades están cubiertas. No se puede negar una sin autorizar la otra.

Incluso ambas intersecciones infinitas, en ambas construcciones, tienen solo $\aleph_0$ *términos.*

Parto de decir que es posible construir el equivalente a una relación inyectiva imposible, según el Teorema de Cantor:
a) Para A=verdadero, construir la DI es posible
b) Para A=falso, construir la TPI es posible

La interpretación de la intersección infinita puede ser ambigua. Pero para cada posible interpretación, existe una relación inyectiva imposible según el Teorema de Cantor. UNA DE LAS DOS DEBE ESTAR BIEN CONSTRUIDA. Ya que en ambas, el único punto dudoso es A. Por lo tanto: UNA EXISTE. Existe UN contraejemplo del Teorema de Cantor.

El asedio en el caso reducido consiste, al igual que en la TPI, en cambiar la definición de cada posible conjunto implicado. Crear definiciones alternativas que generan EXACTAMENTE los mismos conjuntos. Trabajar con ellas para observar como se desactiva la demostración del Teorema y como es posible generar cosas que se suponían imposibles. Los matemáticos suelen afirmar cualquier cosa con tal de que el teorema siga vivo. Han llegado a afirmar lo mismo y lo contrario con absoluta seguridad. No meditan mucho las

[2]Un valor que igual no pertenece a la serie infinita de valores, pero NADA mayor que él, es inalcanzable por la serie de valores o estados decrecientes

[3]Una condición equivalente a la inyectividad para relaciones que no son función

consecuencias. La TPI plantea tan bien las cosas, que negar su única debilidad lleva a decir que $\mathbb{N}$ tiene un cardinal estrictamente mayor que $P(\mathbb{N})$. Incluso a defender el Teorema con argumentos de un trabajo que fue rechazado hace tres años. Para cortar de raíz esa tentación, es indispensable añadir la DI a la serie de documentos. El asedio es más sólido.

Ambas construcciones son contradictorias SOLO si consideramos que $\aleph_0$ y $\aleph_1$ son cardinales distintos. Intercambiar el papel cardinal entre dos conjuntos con el mismo cardinal infinito, es algo común. Es posible construir relaciones que hagan a uno aparentemente mayor que el otro, y viceversa.

Consideremos los números naturales ($\mathbb{N}$) y los números pares ($\mathbb{P}$, letra escogida de su nombre en español):
***No son funciones, son relaciones. Cada elemento del Dominio tiene diferentes imágenes que se representan por el conjunto resultado. Nos podemos fijar en que los conjuntos Imagen, de cada elemento del Dominio, son disjuntos todos entre sí.*

$f_1 : \mathbb{P} \longrightarrow \mathbb{N}$
$f_1(p) = \{p, p+1\}$
**Tenemos dos números naturales por cada número par.*

$f_2 : \mathbb{N} \longrightarrow \mathbb{P}$
$f_2(n) = \{n * 10^4, (n * 10^4) + 2, (n * 10^4) + 4, (n * 10^4) + 6, ..., (n * 10^4) + 9998\}$
**Tenemos 5000 números pares por cada número natural.*

El apéndice solo se añade por dejar constancia. Son cosas que no están chequeadas por falta de recursos. Las pongo por tener todo ordenado ya en una sola serie de publicaciones. Cuando se acaben, continuarán con las Construcciones LJA y sus técnicas avanzadas. Se escriben como pistas para futuros trabajos, como por ejemplo, el de tratar de enumerar TODOS los ordinales, o ir más allá de cosas que he visto en foros como $\aleph_w$, que es asequible para una CLJA. Hipótesis, cartas de referencias de catedráticos, comentarios sobre documentos anónimos que me han enviado... Nada indispensable para el argumento central, pero si se tiene curiosidad pueden ayudar a responder algunas preguntas, como por ejemplo: ¿Qué sucede con todas las demostraciones del Teorema? ¿Qué pistas podemos tener sobre los fallos de la demostración de Cantor? Procuro ser diplomático, porque no niego que el viaje está siendo frustrante. Por si acaso, me permito recordar que la existencia de un solo contraejemplo invalida cualquier demostración. Tengo pistas muy buenas sobre la demostración de Cantor, y algunas sobre otras demostraciones, pero necesitaría ayuda para desarrollarlas.

En el siguiente episodio podremos empezar a hacernos una idea de lo que está sucediendo. Si se reacciona como otras personas lo han hecho en el pasado, pero aún así se le concede al siguiente capítulo, una segunda lectura, es posible darse cuenta de lo sencillo que era caer en esos errores. De lo sutiles que son, y de la extraña sensación que provocan en la cabeza. Las paradojas híbridas son fenómenos lógicos muy escurridizos. Aunque pueda parecer un ejemplo simple, 'atraparla' dentro, con ese diseño, ha costado años de ensayo y error, aún sabiendo desde el inicio por donde iban los tiros.

En realidad, desmontar el Teorema de Cantor es sólo una herramienta para demostrar que las paradojas híbridas existen, y que llevan a teoremas falsos. Pero definirlas bien y aprender a detectarlas mejor es harina de otro costal. A mi me ha costado más de 25 años 'atrapar' una. El siguiente ejemplo es solo un adelanto. Pero no deja de ser una versión reducida de todo lo que va a provocar el ejemplo aplicado a la totalidad de $P(\mathbb{N})$.

C.- 5

El ejemplo

Enseñar el ejemplo, poner tablas y definiciones

C.- 6

Propiedades NO obvias: como pude experimentar

Sorpresivamente, las siguientes propiedades matemáticas NO son obvias. Pero siguen siendo HECHOS.